A Lecture
ON
PREVENTIVE INOCULATION AGAINST CHOLERA IN INDIA.

Delivered at the Examination Hall, Victoria Embankment, on Dec. 18th, 1895.

By W. M. HAFFKINE, D.Sc.

[ON Wednesday afternoon last Professor Haffkine, who is staying temporarily in England, acceded to a request from the Royal College of Physicians of London and the Royal College of Surgeons of England that he should deliver in the Examination Hall of the Conjoint Board an account of his well-known work in India in the matter of the prevention of cholera by inoculation. The chair was taken by Sir J. Russell Reynolds, Bart., President of the Royal College of Physicians of London, and Professor Haffkine entered with the President. Both gentlemen were received with cheers by an expectant audience, far below numerically, however, what might have been expected. Professor Haffkine said:]

The virulence of pathogenic bacilli varies greatly, and in this fact is to be seen the explanation of mild and severe epidemics; and from this, no doubt, arose the practice of preventive inoculation; when a mild epidemic occurred everyone tried to take the disease, seeking close contact with infected persons, and, later, the virus itself was applied to give a mild attack; but, unfortunately, very often what looked like a mild form of the disease was really a severe form occurring in a very resistant subject, hence very severe epidemics arose, so that it has come to pass that legal proceedings are now taken against those who practise this method.

In small-pox, rabies, and syphilis, where the microbe is transferred directly from case to case, and leads no existence outside the human body, great variations in the virulence may be observed, but this is still more the case in those bacteria which lead a saprophytic life; and there appears to be no limit to the variations in virulence that may occur, and not merely variations in virulence, but in shape and size. Thus the cholera bacillus, as the field of investigation grew larger, was found to vary from a comma to a straight bacillus, and from what was little more than a micrococcus to a long, thin bacillus; usually it was harmless to birds, but at times birds were affected by it. The position and number of cilia also varied. Metchnikoff has found that its initial strength may be seventy-five times greater than when the virus has become weakened. The terms used are employed as in small-pox. The infectious material from a patient affected with the disease is a virus, and the process is called variolisation; this was the Eastern practice. On the other hand, the substance cultivated under conditions which will keep the microbe in a fixed state of virulence is a vaccine, and the process is vaccination. It is the difference between vaccination and variolisation which distinguished the method I have employed in India from that used in Spain by Dr. Ferran in 1885. Dr. Ferran injected bacteria from cases of cholera, and the results were so unfortunate that the method was forbidden by the Spanish authorities, and similar disasters have led to the use of any form of cholera inoculation being forbidden in Russia. The method which I have employed in India is on the same lines on which Jenner and Pasteur worked—that is to say, the use of a modified virus. A great difference between the two methods is to be seen in the fact that Jenner's method has survived a hundred years of trial. When Toussaint began to inoculate against anthrax he used the unmodified virus from cases suffering from the disease and the results were exceedingly disastrous, but Pasteur's inoculation against the same disease were with the modified virus, and were eminently successful. In the case of rabies also, preventive inoculation by an attenuated virus had now been used for ten years, and had been applied to many thousand people in France alone. I have abstained from using sterilised cultures in all my inoculations in India, because the effect is very much more evanescent and less trustworthy. The method which I have worked out is to give two injections:[1] the first injection is of a mild form, and the second is one whose virulence has been strengthened. This is given after an interval of five days. The full effect of each is not attained until five days have elapsed, so that the individual is not fully protected till ten days after the first inoculation. The microbe is cultivated under fixed and suitable conditions and its virulence is known, so that it can be used with certainty and safety. One-twentieth of a culture tube has been adopted as the standard dose. The amount of reaction is in direct proportion to the dose, and the amount of protection is in direct proportion to the intensity of the symptoms produced. A slight swelling and pain in the side are the usual local signs, and there is a slight rise of temperature. The amount of pain and fever are in direct proportion to the intensity of the symptoms produced. It is a matter of vital importance that the operator should be master of the strength of the virus used and know exactly the amount of power contained in a given dose.

And now we come to the record: 70,000 injections were made on 42,179 individuals without a single instance of mishap or accident of any description produced by our vaccination. My work in India lasted twenty-nine months—from April, 1893, till the end of July, 1895. The Indian cholera vaccination was applied in ninety-eight localities in the North-West Provinces and Oudh, in the Punjab, in Lower Bengal and Behar, in the Brahmaputra Valley and in Lower Assam, and during this time there were inoculated 294 British officers, 3206 British soldiers, 6629 native officers, non-commissioned officers, and soldiers, 869 civil Europeans, 125 Eurasians, and 31,056 natives of India. No official pressure has been brought to bear upon the population, and persuasion only has been used. In some localities efforts have been made to apply the inoculation to large parties of people living under similar conditions in order that comparison might be made between the inoculated and the uninoculated belonging to the same unit of population. The inoculated people belonged to sixty-four British and native regiments, to nine civil gaols, to forty-five tea estates, to the fixed agricultural population parallel to the Hurdwar pilgrim road, to the bustees of Calcutta, and to a certain number of boarding schools, orphanages, &c., and in the vast majority of cases the inoculated people lived under the direct observation of the military and sanitary authorities of India. Cholera has occurred in the inoculated localities from one to 459 days after the operation, and careful statistics have been immediately collected by the civil and military medical authorities in regard to both inoculated and uninoculated. The results can be grouped into three categories: (1) unsuccessful results, or those where any definite conclusion is impossible; (2) results slightly favourable to the method; and (3) satisfactory results. To the first-class belong observations made in a certain number of tea estates in Assam. The coolie workers live in very isolated bodies and remain unmixed with the general population. The whole of the cases underwent the first part of the treatment only—that is, inoculation with the maximal dose of the first vaccine. Cholera occurred in from one to six months after vaccination. The second inoculation was not made till after the cholera season. At Adam Tila, of 657 non-vaccinated no cases of cholera occurred, and of 318 vaccinated there were 2 cases (0·63 per cent.) with 1 death (0·31 per cent.). At Kalacherra, of 520 non-vaccinated there were 4 cases (0·77 per cent.) with 3 deaths (0·58 per cent.), and of 211 vaccinated there was 1 case (0·47 per cent.) with 1 death (0·47 per cent.). At Chargola, of 1007 non-vaccinated, there were 3 cases (0·30 per cent.) with 1 death (0·10 per cent.); and of 291 vaccinated there were no cases. At Pallarbund, of 1170 non-vaccinated there were 2 cases (0·17 per cent.), with 2 deaths (0·17 per cent.); of 451 vaccinated there were no cases. At Lungla, of 2050 non-vaccinated, there were 3 cases (0·15 per cent.) with 3 deaths (0·15 per cent.); of 421 vaccinated there were no cases. At Burnie Braes, Loobacherra, Kalaincherra, and Sandhura the number of vaccinated is not stated, but 11 cases occurred with 5 deaths. No cases are reported among the 677 vaccinated. To the second class belong observations made on cases where the results are slightly favourable. The results are divided into two groups. In the first maximal doses of the first vaccine only were used and cholera occurred in from

[1] Professor Haffkine explained the method of preparing anti-choleraic vaccine in a former lecture delivered on Wednesday, Feb. 8th, 1893, and reported in THE LANCET of Feb. 11th, 1893.

two to six days after vaccination in the Manchester Regiment and three months and a half after in the case of the Degubber tea estates. The statistics are as follows: In the 2nd Battalion Manchester Regiment, at Dinapore, of 729 non-vaccinated there were 6 cases (0·82 per cent.) with 3 deaths (0·41 per cent.); 193 were vaccinated and there were no cases. At Degubber tea estate in Assam, among the 228 non-vaccinated 2 cases occurred (0·88 per cent.) and 1 death (0·44 per cent.), and no cases were reported among the 387 vaccinated. The second group of observations were made on cases inoculated with weak doses of both vaccines, cholera occurring from 13 to 15 months after operation. Among the British troops in Cawnpore, of 797 non-inoculated there were 19 cases (2·38 per cent.) with 13 deaths (1·63 per cent.), and no cases occurred among the 75 inoculated. In the East Lancashire Regiment at Lucknow, of 640 non-vaccinated there were 120 cases (18·75 per cent.) with 79 deaths (12·34 per cent.), and of 133 vaccinated 18 cases (13·53 per cent.) with 13 deaths (9·77 per cent.). The last class contains observations with satisfactory results. These have been grouped into four parts. In the first group maximal doses of the first vaccine only were given, cholera occurring in from one to three months after vaccination. At the Karkurie tea estate, of 203 non-vaccinated there were 5 cases (2·46 per cent.) with 2 deaths (0·98 per cent.), and of the 709 vaccinated 1 doubtful case (0·24 per cent.) with 1 death (0·24 per cent.). At Kalain tea estate there were 1375 non-vaccinated with 23 cases (1·67 per cent.) and 11 deaths (0·8 per cent.) and of 681 vaccinated 2 cases (0·29 per cent.) with 1 death (0·15 per cent.).

The second group contains cases where small doses of both vaccines were given, cholera being prevalent during vaccination. At Gaya gaol during the first period of five days necessary for the full effect of the first vaccine, of 210 non-vaccinated there were 7 cases (3·35 per cent.) with 5 deaths (2·38 per cent.), and of 212 vaccinated 5 cases (2·36 per cent.) with 4 deaths (1·89 per cent.). During the second period of five days necessary for the full effect of the second vaccine, of 197 non-vaccinated there were 9 cases (4·57 per cent.) with 4 deaths (2·03 per cent.), and of 206 vaccinated 3 cases (1·46 per cent.) with 1 death (0·48 per cent.). During the last four days of the epidemic, of 192 non-vaccinated there were 3 cases (1·56 per cent.) with 1 death (0·52 per cent.), but no cases amongst 201 vaccinated. The total shows 2·56 times fewer cases and 2·05 times fewer deaths amongst vaccinated than amongst non-vaccinated. The difference in the results in the Gaya gaol during the first five days is very slight, and points out the absolute similarity of conditions under which the inoculated and the uninoculated lived.

The third group includes cases with medium doses of both vaccines. The observations extended over 459 dates after vaccination. In Calcutta the comparison between the uninoculated and inoculated has been made exclusively among members of the same families living under the same conditions of life. Observations during 459 days after vaccination were made in the bustees of Calcutta, and middle doses of one and of both vaccines were given. Of eight houses with inoculated people affected during the first period of five days after the first injection there were 5 cases among 75 non-vaccinated (6·66 per cent.) with 3 deaths (4 per cent.) and 3 cases among 52 vaccinated (5·77 per cent.), with 3 deaths (5·77 per cent.). Of two houses with inoculated people affected during the second period of five days necessary for second vaccination there were 2 cases among 8 non-vaccinated (25 per cent.) with 2 deaths (25 per cent.), and no cases among 17 vaccinated. Of twenty-six houses with inoculated people affected between the 11th and 459th day after vaccination there were 38 cases among 263 non-vaccinated (14·45 per cent.) with 34 deaths (12·93 per cent.), and 1 case (in a child which had not been brought up for the second inoculation) among 134 vaccinated (0·75 per cent.) with 1 death (0·75 per cent.).

The last observation (the fourth group) came from Assam, and was received only a few days ago. The full account has not yet reached me, but the preliminary note runs as follows. In Assam, Surgeon-Captain Hare, my co-worker, is continuing these inoculations for the Assam Government, under whose direction all coolies for the Assam-Burma Railway Survey have been collected and sent under an escort. Cholera had broken out amongst the coolies, and Surgeon-Captain Hare immediately applied the inoculation. The result is as follows: Amongst the uninoculated there were 34 cases with 30 deaths, while amongst the inoculated, which formed the larger part, there were only 4 fatal cases.

It appears that in instances where cholera has made the largest number of victims, and where it has sufficiently spread so as to make it probable that the whole population were equally exposed, the result has been invariably favourable to inoculation. Applied during the existence of the epidemic it tends to reduce the mortality even during the first ten days. In Lucknow there was a difference in the number of cases attacked of between 18 and 13 per cent., and in the deaths of between 12 and 9 per cent. The best method is probably to use doses of both vaccines, the second one being kept at the highest strength attainable. The evidence collected up to now is decidedly in favour of inoculation, and my own conviction is strengthened more and more. My responsibility, however, forces me to point out that the number of observations is not yet very large, and that it is desirable to have the results confirmed by more and more information. I hope you will pardon me if I quote the opinion of Koch, whose discovery was the starting point of our inoculation for cholera. He says "the demonstration is complete; the protective power of the method is established finally by the observations collected in India up to now; further perfections and simplifications may be possible, but the main question at issue, the chief part of the problem, is solved by the facts recorded in your report to the Government of India." I quote this by his permission. Many very interesting curative methods by serum injection have been introduced during my absence from England. Treatment by antitoxins must be considered a decided success, but it cannot be used as a preventive treatment, as its effects on the system are very rapidly worn out. Neither the anti-diphtheritic serum nor the anti-cholera serum lasts more than a few days. The treatment stands otherwise in regard to people affected already. On my return to India I intend to make an extensive trial in connexion with the physicians of the country and with the help of Professor Pfeiffer of Berlin, who has put at my disposal his experience on the subject and a supply of antitoxic serum. In case it proves a failure—and there is danger of the patient succumbing before the antitoxin can have its effect—I intend to combine it with transfusion of saline fluids. It is possible that the administration of antitoxic serum will mitigate the symptoms and it is possible that its administration will diminish the active protection afforded by the vaccines. A series of experiments have been undertaken in the Netley Bacteriological Laboratory.

On the day I came back from India I found Pasteur lying on his death-bed. Whatever might have been his appreciation of the work, I have only one desire—that the whole of the honour that may come from my efforts should be referred to his sacred memory. To the Government of India, the officers of the India and Army Medical Staff in India, to Professor Hankin in Agra, to Dr. Powell of Cuchar, and to Dr. Simpson, the well-known health officer of Calcutta, I address my hearty expressions of gratitude for the assistance they have given me in carrying out my work. I beg them to accept this public acknowledgment that without their help I should never have been able to accomplish in India the smallest part of what I have done. I also beg to thank the chairman and the organisers of this meeting for having given me this opportunity of making this communication.

[At the conclusion of the lecture Sir J. Russell Reynolds said he could not let that lecture come to an end without saying on behalf of his colleagues how deeply they were indebted to Professor Haffkine for having done such good work, and for having come there and given them such a lucid exposition of the way in which the work had been done. They congratulated him most heartily for the success which had attended his labours, and hoped that in the future a still greater amount of success would follow. He congratulated the lecturer on another point. Before Professor Haffkine entered the lecture theatre he had told him (Sir J. Russell Reynolds) that he could not speak English. After hearing Professor Haffkine deliver the lecture, however, he thought he had spoken it remarkably well.]

ROYAL COLLEGE OF SURGEONS IN IRELAND.—Professor Alexander Fraser, having passed the necessary examinations, has been admitted a Fellow of the College. Mr. Richard Keatinge, L.R.C.P.I. and L.S.A. Lond., having passed the necessary examination, has been admitted a Licentiate to the College.

An Introductory Address

ON

THE SENSES: THEIR USE AND CULTIVATION.

Delivered at St. Mungo's College, Glasgow,

BY FRANCIS H. NAPIER, F.R.C.S. ENG., M.B., B.S. LOND., F.F.P.S. GLASG.,

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GENTLEMEN,—We are met to-day to inaugurate the commencement of the winter session, and it is my first duty, and a very pleasant duty too, to give to the students, one and all, a very hearty welcome; and in this welcome I speak not only for myself, but I have also the honour to be the mouthpiece of the governing body of the College and of my colleagues of the teaching staff. We are glad to meet again the older students, invigorated, it is to be hoped, by the vacation just drawn to a close, and returning to their studies with renewed ardour. We are glad also to see amongst us for the first time the faces of those who are on the threshold of their medical studies. We congratulate them on their choice of a profession, not because that profession leads to any considerable pecuniary emolument, but because, with good and honest work, it opens up a prospect of a sufficiency to live upon, and gives a boundless opportunity of alleviating the sufferings of those less fortunate than ourselves. Now, gentlemen, when I was asked to deliver the inaugural address this year, I must own that I felt at a loss; for though deeply sensible of the honour of being invited to undertake it, I was at the same time fully conscious of the difficulty of the task before me. I recognised how limited was the choice of a subject. I take it that the inaugural address should be delivered to the student, and primarily to the first-year student. It should not, therefore, be too technical in character, for that would confine its interest to the few; and, on the other hand, it is difficult to find a subject of general interest which has not become hackneyed by constant repetition. The subject of medical education is, of course, one that will exercise a never-ending fascination on all of us, and is of peculiar interest on such an occasion as the present, but on that topic you were addressed not long since in an exhaustive and able manner by one of my colleagues, so I definitely determined to abandon it. After much consideration I decided to collect a few of the well-known and recognised facts and theories relating to the senses, with the object of seeing what bearing they have upon our profession. I do not hope to present to you anything new or original, for, after all, there is little that is new in the world either of thought or reality. The great philosophers of the Greeks—Socrates, Plato, and Aristotle—had dipped into the realms of speculation as deeply as any of our modern thinkers; but I do trust to be able to put before you, briefly and compactly, some of these thoughts of all times, clothed in such a fashion as to draw out more pointedly the special lessons that they hold for us in our professional requirements.

What do we mean when we speak of our senses? What are their use and what their capacities? It is difficult to define what we imply by the term sensation. Sensation appears to be a peculiar modification of consciousness developed by the action of external stimuli on certain special organs called sense organs, by which the nature of sensible objects is made known to us. The senses, as commonly enumerated, are five in number—those of sight, hearing, smell, taste, and touch. For the proper use of these senses we require a special terminal sense organ and a connecting link between the two. The terminal sense organ is that which directly receives the impressions, and varies in character according to the sense to be supplied, and the connecting link plays the purely mechanical part of conducting the impressions so received to the central sense organ or special part of the brain, to be there translated to the consciousness as sensations. There must also exist some stimulus external to ourselves to produce the impression on the terminal organ, and an unknown quantity, which we call the mind, which makes us conscious of the impressions on the brain. It is quite evident that all these factors are essential. Thus, if the eye be absent or the retina insensitive, there can be no consciousness of light; and if that part of the brain which responds to impressions on the ear be absent or imperfect, the sense of hearing is lost or modified. These factors are present in all animals which are possessed of senses; and just as man has the most highly-developed brain, so, for the requirements of his life, are his sensory organs correspondingly developed. It would be useless to him to be endowed with a brain capable of receiving and translating the most complex impressions, unless he possessed terminal organs equally capable of receiving such impressions, and however perfect and sensitive his sensory organs they would be of little use to a brain imperfectly developed.

It is impossible to classify the senses in any way that is strictly scientific; but the usual method is to class them under headings descriptive of the impressions produced on the mind through the medium of the different sense-organs. Thus we speak of the senses of sight, hearing, smell, taste, and touch; but it will be readily seen that the sense of touch is completely different and much more complex in character than the other senses; it is for this reason that the sense of touch is sometimes spoken of as a "common sense," and the other four as "special senses." Sensations depend on the nervous action excited, which, again, on its part depends largely on the manner in which the external impulse is applied. This holds good for all the senses; thus tone and colour depend on the rapidity of the impulses made on the auditory and ocular apparatus, and it is self-evident that the sense of touch varies considerably according to the stimulus applied. But there is this great distinction that, whereas stimuli applied to the nerves of a special sense give rise to a very limited range of sensations, those applied to the tactile organs excite a class of sensations which vary almost endlessly, according to the manner in which the impulses are applied. We know that, whatever the character of the stimulus applied to the ocular apparatus, the result is always the same—a sensation of light. The victim of a blow on the eye "sees stars." Again, rapid movements of the eyes and pressure on the eyeballs in a dark room produce the same sensation of light. Whether the stimulus be mechanical or spectral the result is identical. The same holds good for the auditory apparatus; whatever the stimulus the result is sound; the kind of sound may vary—it may be musical or discordant, it may be of high or of low pitch—but it is sound. We know that tinnitus aurium, or persistent subjective sound in the ears, is produced by stimulation of the auditory nerve or pressure on the labyrinthine nerve fibres in diseased conditions of the ear. With general sensibility, however, the case is different. We seem to have many senses bound up under the same term, some being modifications of each other, but others partaking more of a special nature; thus we have the sense of simple touch, the sense of locality, the temperature sense, the sense of pain, and the muscular sense. Some of these, I have said, are merely varieties or degrees of the same sense, and are produced by varying stimuli applied to the sensory nerves. As a familiar illustration of this fact I may point out that the schoolboy in handling the cane as a matter of curiosity is conscious of the sense of simple touch; but when the same cane is applied smartly to the fingers as a means of correction his sensations are fully represented by his cries.

There is another important distinction between the sense of touch and the other senses, and it is this—that while each of the latter is excited through a single organ, that of touch is excited by impressions applied to the whole surface of the body. It would manifestly be very inconvenient to us if the general surface of the body possessed the sense of sight—all that is necessary is that the special sense organ of vision should have a commanding but protected position. The same holds good for the other special senses, but not so with the sense of touch. That sense is given to us principally for our protection, and, this being so, it is necessary, in order that it should fulfil that purpose, that the general surface of the body should respond to the stimuli. Consequently we find that the skin is much more sensitive than the deeper structures of the body. A muscle when cut is almost insensitive unless a sensory nerve is injured. Every surgeon knows that the most painful part of an operation is in the initial stage, when the skin is being divided, and that when he gets to the deeper structures of the body, unless diseased, they are almost insensitive. Again, the water which scalds the lips and mouth when it reaches the stomach is only

able to give us a slight sensation of pain. Thus we see that though all the senses are alike in their physiological requirements, the nature and distribution of the sense of touch is widely different from that of the other senses. Now, in ordinary language we speak of our different sensations as though perceived by the organ which receives the impressions; we say that the eye sees, the ear hears, and the tongue tastes; this is a convenient and even necessary method of expressing ourselves, but scientifically it is inaccurate. It is the brain which alone has the power of perception; the eye does not see, nor the ear hear, neither does the tongue taste, but the impressions received by these organs are conveyed to the brain and translated by the mind into sensations of colour, sound, &c.; the sensations are solely in the mind. So that as sensation is a quality of the mind, and not of the body, it is a mistake to speak of the different sensations, as we habitually do, as bodily sensations. Again, when we fix our attention on objects around us we commonly and most inaccurately speak of our perception of those objects through certain qualities. Thus we speak of the colour of flowers, the song of birds, and the taste of food, inferring that the object has that particular quality which it has not, for these qualities are our own mental sensations. More than 400 years B.C. Plato recognised this fact, and in his "Dialogue on the Republic" illustrates the nature of our sensuous knowledge through a parable. He supposes a number of captives confined in a cave and bound down in such a manner that they can only see the further end of their prison, and that across the mouth of the cave pass figures which cast their shadows within. The prisoners, only able to see the shadows, would speak of them as realities and invest them with names and qualities; so with us: the world is a mere world of sensations and shadows, quite as unlike the realities as Plato declared them to be.

It is difficult for us to conceive that we do not see things as they appear to us projected into space, but it is no longer capable of dispute that our ideas of size, space, and distance are the results of acquired knowledge founded on mental efforts and experiments principally made during the year of infancy. The man who, blind from birth, is suddenly, by surgical operation, put in possession of the faculty of sight cannot distinguish distance by sight alone. All objects appear equally near to the eye, and objects known to the touch are not recognised by the eye until the person becomes accustomed to compare his sensations of touch with those of vision; he cannot even distinguish a body in action from a body at rest—that is, he does not conceive that successive impressions of the object over the field of the retina imply that it is moving. Though this is so, though we are perfectly aware that nothing outside ourselves possesses the qualities that we invest it with, still we find it convenient to ignore the fact and to speak of the brilliant sunshine, the green grass, the disagreeable smell, and so on—it is our only method of expressing ourselves. If it be true, then, as I have just stated, that all sensations take place in the brain, how comes it that we refer these sensations to objects outside ourselves? The answer is, By experience. The newly born child has no knowledge of the external world, and his range of sensations is very limited; he recognises the sensation of light and moves his eyes towards the source of the impression, and, as he grows older, he learns to associate involuntarily the movements of the eye necessary for the fixation of the object. At the same time, the sense of touch being very early developed, he touches the object, recognises its presence, and learns the requisite muscular effort required to bring the hand into contact with it. Not only this, but he sees his hand, he sees its movements, and he sees it touch the object. By comparing these impressions of sight, touch, and muscular movement he elaborates, by slow degrees, the ideas of substance, of resistance, and of extension, and attaches physical qualities to certain objects. These different sensations combine to teach him that the object which is giving rise to varying sensations of the mind is external to himself, he begins to be conscious of something outside the *ego*—conscious of the world around him. If he were only to recognise the mental impressions, he would have to particularise each separate impression producing sensations of light, feeling, muscular sense and movement, but he only recognises one impression—namely, the object that he is seeing and touching: therefore it must be outside himself. As he increases in physical and mental development the child learns to refer all his sensations to external objects, and to think of them as directly giving rise to those sensations.

In fact, all our knowledge of the world around us, our knowledge of everything that exists, our whole power of reasoning, is dependent on the exercise of our senses; without his senses man would be merely a potential being. Kant puts the same thing tersely and epigrammatically. "Concepts without intuitions," he says, "are empty; intuitions without concepts are blind"; that is to say, "Without our senses our mind would be empty, without our mind our senses would be blind." In these few words is bound up the whole philosophy of the subject. It does not seem, however, that all, or nearly all, the senses are necessary for the full development of the brain. We are aware of many cases which prove the contrary—men and women who, deprived of one or more senses from birth or early childhood, have been found capable of fulfilling important duties in every walk of life; their conception of the world around them must be very different to ours, but what they lose from defect of one sense is made up to them by hypersensitiveness of others. John Stanley, the eminent musician, born in 1713, lost his sight at the age of two years. For fifty years of his life he held the appointment of organist both of the Temple Church and of St. Andrew's, Holborn; he was an expert performer on the flute and the violin, and for ten years superintended the performance of the oratorios at Covent Garden Theatre. Stanley's skill as a musician was such that, when at a performance of one of Handel's *Te Deums* he found the organ a semitone higher than the other instruments, he without any premeditation transposed the whole piece from D into the key of seven sharps major. To take another striking instance of what the capacities of a blind man are, I may mention the case of John Metcalf, the greatest blind mechanic who ever lived, who, born in the year 1717, at the age of six became totally blind from small-pox. In the words of Mr. Hanks Levy, himself a blind man, speaking of Metcalf, he says: "He walked and rode, he swam, fished, played at cards and skittles, rode and betted on races, was an excellent performer on the hautboy and other instruments, was a very successful recruiting agent, and as a soldier was the life of the corps to which he belonged. He was a dealer in horses, fish, hay, and wood, and succeeded in evading the law in various contraband transactions. He was successful in building houses and in making a great number of roads and bridges which to this day are a lasting memorial to the genius, perseverance, and indomitable courage of this blind man." In our own days we have had John Fawcett, Postmaster-General and Cabinet Minister, one who through his great mental qualities and sound common sense was a mainstay to his party. All these are instances of what can be done in spite of the loss of a single sense. But let us go further. We have all heard of that wonderful American woman, Laura Bridgman, born in 1829. At two years of age, when she had only mastered the difference between A and B, she became seriously ill, and when she recovered, five months later, she was blind, deaf, and had nearly lost the power of smell and taste. Her sense of touch, however, was perfect, and through this one sense she was taught to read by several systems; she was taught to write, and, most wonderful of all, communicate with her fellow-creatures. Laura Bridgman possessed a master-mind; no difficulties were too great for her, and she died at an early age, justly celebrated as a teacher and an author. The case of Helen Keller is, perhaps, the most wonderful of all. Born in 1880, she became deaf, dumb, and blind at the age of eighteen months. When seven years of age she was placed under the instruction of an expert, who taught her entirely through the sense of touch. In a few days she had mastered the manual alphabet and was learning the names of objects around her, and within four months of the beginning of her education she was able to write a perfectly legible and correctly spelled letter. At the age of ten she learned to speak, being taught to imitate the movements of the lips, tongue, and throat in her instructor by touching them with her fingers. In twenty-four days she had the free use of speech. In her case, as in that of Laura Bridgman, her education was effected through the sense of touch; if she had been without that sense, her brain would have remained dormant—capable, it is true, of great things, but undeveloped because incapable of receiving intelligence of anything outside itself.

Before leaving this part of my subject let me say a few words on the subject of the unrecognised sense.

Just as mathematicians are fond of speculating about a fourth dimension, so do physiologists try to prove the existence of a sixth sense. I have personally no doubt—and no one who has much to do with them can fail to recognise it—that the blind possess a sense which is either absent or lying dormant in the sighted. A blind man who has been properly educated will walk along a crowded street, cross roads, and run up and down staircases with the greatest facility. I have seen dozens of blind men skating together and never coming into collision, which is more than can be said for their sighted brethren. A blind man when opposite an object can perceive whether it be tall or short, slender or bulky; he can detect a solitary object or a continuous fence. Mr. Hanks Levy says that he can do all this and more; when walking along a street he can distinguish shops from private houses, and even point out the doors and windows. He says that darkness makes no difference to him, but that a fog dulls his powers; that he seems to perceive objects through the skin of the face and to have the impressions immediately transmitted to the brain. Covering his face with a thick veil destroys the sense altogether. He calls this unrecognised sense by the name of "facial perception."

Now it is quite evident that just as our mental powers can be developed by education so also can our senses. The newly-born child is conscious of the stimulus produced by light, but he has no impression of objects, he has no peripheral vision. His sense of touch is strongly developed from birth, but he is without the sense of hearing till the second or third day, and possibly later. As the child grows up his senses become more developed and his intelligence increases; so it is with all of us: our senses and our intelligence go hand in hand and increase in powers of perception and conception until with advancing age they again become blunted. Some are, no doubt, endowed by nature with greater quickness of observation than others, but all can cultivate the powers they possess. About the middle of this century there appeared in London a Frenchman named Houdin, who had cultivated his powers of quick and accurate observation to a degree of perception that was hardly short of miraculous. His father had been in the habit of training his perceptive faculties from early youth by making his son walk down a street and then describe all that he had seen in the windows of the shops he had passed. Taking advantage of his exceptional quickness, the father professed that his son was gifted with second sight and made a handsome income by exhibiting his powers. One of his favourite tricks was to hold a *séance* in the drawing-room of a strange house and to make his son give a description of one of the rooms on the ground floor, which room he had previously allowed him to glance into on his way through the hall. Houdin would accurately describe not only the furniture and ornaments of the room, but also the subjects of the pictures and the names of the books in the bookcase—all his information being obtained by one quick glance. The painter in the study of his art learns to distinguish gradations of colour too subtle for the uneducated eye to perceive. He can resolve colours into their component parts, and when he wishes to reproduce the beauties of nature on his canvas he uses a number of pigments which to the uninitiated bear no relation to the general scheme of colour. The musician, by long practice, can recognise the fundamental and overtones of every note; he can pick out the individual part in a complicated piece of orchestral work, and a false note made by a single instrument is immediately detected. The wine-taster is, by long experience, able to value the different kinds of wine, either through the sense of taste or smell. So it is with the medical man, who is enabled to detect the slightest departure from the standard of health with a precision only born of constant practice and observation. The whole art of diagnosis, all success in treatment, depends on an intelligent use of our senses. Everything we know in medicine and surgery has been learned through the senses, and the greatest discoveries have been made by means of discriminate observation. The medical and scientific world is at the present moment mourning the loss of one of the greatest savants and experimenters of modern times; one who, by his genius, became pre-eminent as a chemist; one who saved for his fellow-countrymen untold wealth, and who paved the way for the successful application of preventive treatment in medicine. I speak, of course, of Monsieur Pasteur, who, living to an advanced age, never seemed to tire of the *rôle* of benefactor to his fellow creatures. How was it done? By the constant and untiring use of the senses, by trained observation, and by well-ordered experiments. We cannot begin too soon in our medical education to cultivate those senses which are to assist us so much in our profession. Anatomy was never learned by reading books; the only true way to study anatomy is by dissecting and seeing for oneself the complex arrangement of the human frame. Learnt in this way it is never, it can never, be forgotten. It was while dissecting as a student that Sir James Paget discovered the presence of the trichina spiralis in the diseased condition called trichiasis. And whilst I am on the subject of anatomy let me impress on you one thing, and that is to feel everything with your fingers as well as seeing it. Holden says that every surgeon should have eyes at the end of his fingers, so as to form a mental picture of what he feels, and every surgeon knows that when operating he has often to be guided by his fingers where, owing to bleeding or position, he cannot see. But unless he has learned by experience to recognise what he feels his fingers will be of no use to him. So I cannot impress on you too strongly the importance of accustoming your fingers to the feeling of the normal parts and their relation to each other, and this experience you can gain in the dissecting room with very little trouble. Just as anatomy and physiology, chemistry and materia medica, and all those subjects which will take up your attention during the first two years of your studies—I say, just as these subjects lead you onward to the study of the greater sciences of medicine and surgery, so the habits of observation that you have acquired while mastering them become of infinite value to you when face to face with disease in the wards or the dispensary. Here, again, your efforts to acquire a habit of quick observation should be unceasing—eye, ear, touch, all the senses should be brought into play, first consciously, but with practice almost unconsciously. You may think that I am laying an unnecessary amount of stress on this point, but I assure you it is not so. From my own experience I find that a very large proportion of students notice nothing about their patients until they begin to interrogate them and to find out the history of their complaint. The patient possibly is lame, or his fingers are disfigured with rheumatic gout, or one of his eyes may be injured, but the unobservant student has seen nothing; not so with the practised observer, who takes immediate note of any peculiarity of gait, posture, or figure, who hears the cough and notes its character, and takes in, almost insensibly, the nature and characteristics of his patient before asking him a single question. In diagnosis there are two methods of procedure usually followed; on is to take note of all the physical signs and symptoms of the patient, and afterwards to elucidate the history of the case, and the other method is to reverse the process and begin with the history. The latter is the more generally adopted as it is the easier, for the more salient features of the disease may often be discovered through the history without the trouble of any further examination; but whichever method is carried out it is wise to begin by taking a rapid and comprehensive survey of your patient before doing anything else, for it is in the first few seconds that you will notice most. But let me warn you, on the other hand, against the evils of "snapshot diagnosis" which we are all of us so prone to in the earlier part of our career. These rapid observations of the outstanding features of a case should not be made the basis of an immediate diagnosis, but should rather act as guides to our subsequent examination, both physical and historical, of the condition of the sufferer.

Let me give you a few instances of what I mean. The man whose jaw is broken supports his chin on his hand; when the clavicle is fractured the shoulder on that side is flattened and drawn forwards and inwards, and the elbow is supported by the opposite hand to take off the weight. The peculiar swaying gait, the body being poised over each limb in turn at every step, betrays the condition called congenital dislocation of the hip, and the position of the limb makes us suspect the presence of hip disease in its early stage, the joint being flexed, abducted, and rotated outwards into the position of greatest ease. A person suffering from inability to face the light, with watering of the eyes, compels us to think of disease of the cornea; but if these symptoms are confined to one eye we suspect the presence of a foreign body or some local cause of irritation. The ataxic patient walks into the room with exaggerated movement of the legs, but he who is suffering from lateral sclerosis drags his stiffened limbs behind him. The complexion and appearance of the face may help us in many

ways—it may be anæmic, chlorotic, flushed, cyanotic, or jaundiced; it may be emaciated, puffed, or œdematous. These are only a few illustrations amongst a host that crowd into one's mind. Numberless instances might be quoted to illustrate the value of the cultivation of the senses in the practice of our profession. Take the case of tumours. The uneducated eye sees a swelling of a certain size and shape and nothing more; but the surgeon has to learn the nature of the swelling—he looks at the skin over it and at the vessels transversing its surface; he notes its colour and the presence of inflammation or ulceration; his fingers detect whether the skin over the tumours is loose or bound down, whether there is fluid inside it, or, if solid, what its consistence; the hand applied to the surface detects increase of temperature or presence of pulsation, and the ear or stethoscope hears the bruit or sound within. All these points and more must be gone into before a satisfactory diagnosis can be made.

Even the most highly trained senses may be mistaken, and it should not be forgotten that a single sense may be wrong in its deduction, but that where several senses point to the same conclusion the evidence is much strengthened. We have all heard, and some of us may have had experience, of illusions of the senses, but we know that it is always a single sense that has been led astray; the ghost is seen gliding through the corridor, but there is no sound or footfall; the carriage is heard to drive up to the door, but no horses can be seen. An illusion never affects more than one sense at the same moment. Again, to take other instances, the educated fingers can detect the slightest devintion from the normal standard in the tension of the eyeball. The operator, by his cultivated sense of touch and exact balance of muscular action, is enabled to perform difficult and dangerous operations with comparative ease and safety. To such a pitch of perfection can this "tactus eruditus," or educated sense of touch, be brought that the surgeon, in passing the catheter or the lacrymal probe, can tell immediately if the point of his instrument is following a wrong direction, and is informed of the character of the mucous surface his instrument is traversing. I was told lately of a well-known surgeon who was exploring an incised kidney through a lumbar incision in order to discover the presence of a stone. With the point of his finger he was able to find it; and not only so, but he gave an elaborate description of the stone, its size, shape, and character, so graphic and so precise that his auditor could have drawn an exact representation of the calculus before he saw it.

Again, what should we know of the condition of the internal organs if it were not for our educated senses? Take the case of the chest—with the ear and the stethoscope we listen to the sound of the heart and discover the presence, character, and position of murmurs or periodical sounds; we listen to the lungs and notice the respiratory and pleural sounds and the vocal resonance. Inspection, auscultation, palpitation, and percussion all give their quotum of information. And so on through the whole range of medicine and surgery. It is quite evident then that you cannot bring yourself too much in contact with patients and their diseases, and it is for this reason that you are much to be congratulated on the wealth of material ready to your hand. Here you will have no excuse for not cultivating those senses which in some other schools might become blunted for want of use. And let me strongly advise you not to depend on what your teachers tell you, but to depend on your own observation; during the next few years you will be under the guidance of many instructors, but all they can do for you is to teach you how to learn for yourselves: your teachers as well as yourselves are merely students, only a few rungs higher up the long ladder of knowledge; they are all liable to error, and it should be your constant care to correct such error by the constant use of your own observation. I do not ask any one of you to become a Sherlock Holmes; that most interesting person, who died in this country in the early spring, but seems to have come to life again in America, had a comparatively simple task before him; from an accomplished fact he had to trace back the sequence of events until by discovering the why and the wherefore he was able to put his finger on the perpetrator of the deed. We have a much harder task, for we must look forwards as well as backwards; not only must we find the first causes and trace the origin and course of a disease, but we must also discover the indications which point to its future progress either for good or bad. But it is not sufficient to haunt the wards and dispensaries. We have seen already that sensation is a mental quality; consequently the brain must be educated. It is not sufficient for the brain to be a simple storehouse of impulses received through the senses; it must also be educated in order to give these sensations their proper proportion and significance. Reading, and wide reading, must be resorted to, to develop the mind and give it a broad grasp of the facts and realities of life. It is not by the exclusive use of the senses or by reading only that the highest development of reason is obtained, but by a proper combination of the two.

And now, gentlemen, a few words to those who are just beginning their professional career. You have probably studied your college calendar and have mystified yourselves to some extent with numberless details of what is about to be required of you. You have grasped the one outstanding and appalling fact that many examinations have to be passed before you can enter the portals of the medical profession. The terrors of these examinations have probably been enhanced by your friends—by those who have failed, because they wish to impress on you an explanation for their failure, and equally by those who have passed, who are anxious that you should realise the value of their achievements. You have very likely been told that for the next five years your life will be made a burden to you by their constant ordeals, and if that were in reality all you had to look forward to your existence would indeed be insupportable. But it is not so; and I implore you to remember from the first, from the very commencement of your professional studies, that the aim and object of those studies is not primarily or to any important degree to enable you to pass certain examinations, but that their object is to teach you your work, and to train you in the duties of your profession. A man who knows his work will certainly pass his examinations; but, on the other hand, many men have passed successfully only to find out afterwards that they did not know their work, and that their best opportunities for real study had passed away. The best advice I can give you is to put all thought of examinations out of your minds, to do the work that your teachers direct you to do, and to do it thoroughly, and when the time comes for the final efforts, when each man strains every nerve to collect all his knowledge in a concrete form, you will find what a comparatively easy task you have before you, and examinations will lose their terrors. Work for the sake of the work itself, and it will well repay you. Some men work to make a living, some for ambition's sake, and some for the pure love of doing good to their fellow-creatures. Now I presume that most of us take up the medical profession with the object of making a living, and a very good object it is, too. I am not going to pretend to you that our one and only stimulus is the opportunity presented to us through our profession of doing good; you all know that it is not so; you have decided to join the ranks of the medical profession in order to make your way in the world. This is your primary object, but to it is added the great pleasure of knowing that inseparably bound up in the practice of that profession is the fact that we are benefiting mankind. What a stimulus should this be to us to make our work as perfect as we can, not only during our student days, but through the whole of our career.

A NATIONAL SYSTEM OF NOTIFICATION AND REGISTRATION OF SICKNESS.[1]

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THE subject of this paper is not novel. Most of the proposals and suggestions which I shall make have been already made, more ably than I can hope to repeat them; and what is novel in my remarks is but the natural outcome of the pioneer advocacy by B. W. Richardson, Farr, Rumsey, Ransome, and many others. The present time, however, seems opportune to reopen the question, review the progress already made, compare our experience and present condition as regards the notification of sickness with that of other countries, and indicate the directions in which reform and advance are urgently required and may be most

[1] Abstract of a paper read before the Royal Statistical Society on Dec. 17th, 1895, Mr. C. S. Loch, B.A., Vice-President, being in the chair.

advantageously pursued. I shall in the first place briefly sketch the history of the question and the progress already made; this progress will in the next place be contrasted with that made in some other European countries; and, finally, proposals for further progress will be made.

The office of Registrar-General of Births, Deaths, and Marriages in England was created in 1836. The first report of the Registrar-General was published in 1839. Although the comparison of death-rates of great towns with each other, particularly for short periods, is fraught with fallacies, the general result of the publicity secured and of the consequent efforts on the part of local authorities has been an immense improvement in the public health of the community. The reduction in the general death-rate from 24·7 in town districts in 1851–60 to 20·2 in 1884–93, and from 19·9 in country districts in 1851–60 to 17·5 in 1884–93, and the reduction of the death-rate from "fever" from 792 per million in 1858–60 to 202 per million in 1886–90, are sufficient evidence of this. It soon, however, became evident that registration of deaths gave a very imperfect view of the prevalence of disease. It is very fallacious to assume any fixed ratio between sickness and mortality. The fatality of infectious diseases, for instance, varies greatly in different outbreaks under varying circumstances and in different localities. Thus, if it be required to compare the amount of scarlet fever in Brighton with that in London, in 1894 the death-rate from this disease in London was 0·22 and the number of cases was 4·24 per 1000 of the population. In Brighton in the same year the corresponding death-rate was 0·03 and the case-rate 1·85 per 1000 of the population. It can easily be calculated from these data that the ratio of the scarlet fever death-rate in Brighton and London was as 1 : 7·3, while the ratio of the corresponding case-rate was as 1 : 2·2. Thus the fatality of scarlet fever in Brighton was 1 in 62 cases, while that in London was 1 in 19 cases. Hence, while the deaths from scarlet fever in London were over seven times as numerous (in proportion to population) as those in Brighton, the cases were only about twice as numerous. This illustration serves to show that *mortality* is not necessarily a correct index of the *morbidity* of a community. The highest ratio of sickness is occasionally found associated with a favourable rate of mortality. Mortality statistics necessarily ignore everything that precedes the close of life. They are silent about the large mass of common sickness, which, although it may disable a man, is not "unto death." From the standpoint of the commonwealth and the common health, sickness is more important than death; for "it is the amount and duration of sickness rather than the mortality that tell on the prosperity of a community." (Dr. Dickson.) Or, as Charles Dickens has stated it: "It concerns a man more to know the risk of the fifty illnesses that may throw him on his back than the possible date of the one death that must come. We must have a list of killed *and of the wounded too*."[2]

[Dr. Newsholme then proceeded to give the history of attempts to establish registration of sickness. He said:]

Dr. Rumsey[3] in 1875 mentioned that it was one of "twelve proposals by which the lives of many thousands of the rich as well as the poor may be saved yearly," made to Parliament by Mr. John Bellers at the beginning of the eighteenth century, before the first of our modern hospitals was planned. It was again urged by Dr. Clifton, physician to the Prince of Wales in 1732, with special references to hospitals. Dr. Rumsey in 1844, in his evidence before the Medical Poor Relief Committee of the House of Commons, suggested a comprehensive plan for the uniform registration of the sickness which affects the poorer classes. In 1848 Dr. Liddle, subsequently medical officer of health of Whitechapel, proposed amended forms for the weekly medical returns made by their medical officers to boards of guardians, and the utilisation of these returns in general sanitary inquiries. About the same time it was suggested in the *Sanitary Review*[4] that there should be appointed a Registrar-General of *Diseases* in London as the central authority, to whom the district returns, after local use, should be forwarded for digest and publication. Dr. B. W. Richardson was, I believe, the first to carry any scheme for notification and registration of sickness into actual practice. The cases notified were tabulated in the *Journal of Public Health and Sanitary Review* of 1855; but he had written on the subject as far back as 1852. The registration was continued by Dr. Richardson for several years, "and in the end had observers, from Dr. Moyle of the Scilly Islands to Dr. Spence of Lerwick, in the Shetlands. At one time he had forty four observers from latitude 40° 50′ N. to 60° 9′ N., and from longitude 6° 24′ W. to 1° 8′ W. These observers were all admirable man, and many of their local reports were most valuable, although now forgotten. They entered their remarks on printed forms, which were regularly posted to them each quarter." In the end, attempts to secure official support for the work having failed, the notification ceased. Dr. Richardson's personal pioneer effort to secure information as to sickness from different sources was soon followed by the Metropolitan Association of Health Officers, which in 1857 organised a combined effort to give authentic information concerning sickness of all kinds attended at the public expense. The returns included sickness of all kinds attended at the public expense, in hospitals and dispensaries, and by Poor-law medical officers, whether outdoor cases or in workhouses and infirmaries. The returns were contributed voluntarily and gratuitously by the respective medical officers of these institutions and the Poor-law medical officers. The General Board of Health undertook to print and circulate the weekly and quarterly tables; and meteorological tables were appended to each publication. This magnificent voluntary effort for some time appeared likely to prosper. At the most successful period, however, rarely more than 50 of the 109 metropolitan hospitals and dispensaries contributed to the returns. The returns of Poor-law cases were, at the best, from only 80 of the 180 Poor-law medical officers in the metropolis; and the official publication collapsed in November, 1858, before the end of its second year of publication. A much more successful attempt was organised in 1860 by the Sanitary Association of Manchester and Salford, Dr. Arthur Ransome being the moving central spirit in it. The tables compiled by this association had one special merit not shared by those of the Metropolitan Association: the number of deaths among the cases reported was stated, so that a complete comparison between the sickness and mortality in the groups and classes of population included in the reports could be made. The returns seem to have been conscientiously and completely made, thus giving them, as claimed by the honorary secretaries in 1862, "a value which no similar return has ever attained before." From this point the history of the attempt to establish registration of sickness is chiefly comprised in the proceedings of special committees of the Social Science and the British Medical Associations. At the Bradford meeting of the Social Science Association, in 1859, Dr. Rumsey read two papers bearing on the registration of sickness, and on the general working of the system of registration of deaths,[5] and, as the result of the discussion which followed, a committee was formed. This committee, in March, 1860, passed a resolution recommending, among other things, that the superintendence of the registration of births and deaths should be combined with that of sickness attended at the public expense, and, as far as possible, that of sickness attended at public institutions. This resolution was subsequently endorsed by the association and brought under the notice of the Home Office. At a meeting of the Lancashire and Cheshire Branch of the British Medical Association, held on Oct. 24th, 1862, it was resolved that a sub-committee be appointed "to consider and report on the best means of carrying out the registration of disease in large towns." A committee of the whole British Medical Association was appointed in 1865, at the instance of Dr. Ransome, and for ten subsequent years he prepared valuable reports, from which the following information is extracted. At a meeting of the British Medical Association held in Dublin on Aug. 9th, 1867, the form of return proposed by the above committee for the uniform registration of disease was adopted; and in January, 1868, the registration of disease occurring in public practice was commenced upon the same plan and with the same list of diseases at Manchester and Salford, St. Marylebone, Birmingham, Newcastle-upon-Tyne, and Gateshead. The returns were made monthly at St. Marylebone, weekly at the other places.

In 1869 a deputation headed by Dr. B. W. Richardson waited upon the President of the Local Government Board, who expressed himself "heartily with the deputation in spirit." In 1870 a deputation of the British Medical Association waited on Mr. Goschen, who thought it desirable to

[2] All the Year Round, vol. iv., pp. 227 and 228.
[3] Essays and Papers on Some Fallacies of Vital Statistics, 1875, p. 47.
[4] Vol. iii., p. 317.
[5] Rumsey, op. cit., pp. 1 and 17.

wait for the report of the Royal Sanitary Commission. He agreed that the registration of disease would be an excellent thing. The report of the Sanitary Commission appeared in 1871, but nothing came of it.

One by one the towns contributing to the voluntary notification of sickness ceased their work, the efforts of Manchester and Salford being the most protracted and successful. It need cause no surprise that the voluntary cooperative principle has failed in this instance, notwithstanding the pertinacity and enthusiasm of its earlier advocates. "The voluntary principle, so powerful in the diffusion of Christianity, in works of mercy, in struggles for liberty, and in scientific discovery, has invariably proved quite unequal to the regular, constant, and universal performance of laborious official duties without any hope of profit or of praise." (Rumsey.)

The subject of a national system of registration of disease, the attempts to establish which I have sketched, appears to have gradually dropped into abeyance. It was blessed by medical men and sanitarians and Secretaries of State, and yet the inertia of officialdom appears to have prevented any practical steps being taken. The measure was not one which it was profitable to pursue in the stress of political party strife, and it was pushed aside for more urgent and politically more attractive schemes.

[Dr. Newsholme then passed on to consider the compulsory notification of disease:]

In September, 1877, the first local Act for enforcing the compulsory notification of the chief infectious diseases came into operation in Bolton, Lancashire. This example was followed by other towns, and the adoptive enactment of the Infectious Disease (Notification) Act in 1889 was followed by a rapid adoption of the Act by urban and rural sanitary authorities throughout England. At the present time the Act applies to five-sixths of the English population, and there is little doubt that it will shortly be made compulsory through the whole of Great Britain. Notification is but a means to an end. If the early and authentic information imparted to health officers by notification is simply filed in the office, the course of an epidemic will obviously be undisturbed; but when such notifications are followed by conscientious investigation, when the water-supply, the milk-supply, the school attendance, and a number of other factors in connexion with a series of cases of infectious diseases are examined, it is evident that the resulting chain of evidence may be, as in many instances it has been, so strong as to lead to immediate preventive measures of a most successful character, and in other instances to force the most radical reforms upon even unwilling sanitary authorities. This does not exhaust the benefit derived from compulsory notification of infectious diseases: the notifications have forced upon sanitary authorities the knowledge that there are infectious diseases in their midst, and the constant reiteration of the lesson has gradually and increasingly braced them up to the discharge of their duties. Hence it is not surprising to find that at no previous period of the sanitary history of England has there been such great activity as since 1889 in the provision of isolation hospitals. Even if these isolation hospitals have not, by the removal of first cases of infectious diseases in houses, diminished the prevalence of infectious diseases, they have as humanitarian institutions justified their existence by the better and more successful treatment that the majority of patients thus removed have secured; but they have also diminished the actual amount of some of these diseases. Small-pox epidemics are more easily manageable and have been kept within narrower bounds in communities in which all cases are notified and isolation enforced. Scarlet fever has declined enormously in mortality in recent years. Some of this decline is doubtless due to the milder type of disease now prevalent, the case mortality having become greatly reduced. It may be fairly argued, however, that the diminishing malignancy of this disease is partially due to the fact that cases of it, instead of being treated in crowded houses with imperfect nursing, are now treated in large airy wards, the virus of the disease not being concentrated by an unfavourable environment. This hospital treatment of infectious patients can only be secured in the majority of instances through the machinery of compulsory notification of the cases. Notification of infectious diseases, by forcing attention to them, has led to the provision of more efficient means of disinfection, to the removal of insanitary conditions to which in some instances they owe their existence, and to the steadily improving education of the public in hygienic matters.

[Dr. Newsholme then pointed out the various advantages gained from the mass of information accumulated through notification, and strongly urged the compulsory notification of *all* infectious diseases. He also suggested an interchange of information bearing upon infectious disease: (1) between different districts of this country, and (2) between this country and other countries. He continued:]

We may conveniently consider here foreign methods of notification and registration of sickness. A recent investigation into the etiology and relative prevalence of rheumatic fever in various parts of the world[9] has made me familiar with the available sources of information in many countries, and by personal inquiries in German and Scandinavian towns I have been able to acquire additional information from the responsible medical officers.

[Dr. Newsholme hereupon gave an account of the means adopted for the notification and registration of sickness in Belgium, Germany, Denmark, Sweden, and Norway, and after claiming that the scope of preventive medicine was co-extensive with all diseases, except the consequences of old age, concluded his paper with the following proposals:]

Accurate knowledge of sickness, of its degree of incidence in relation to sex, age, occupation, housing, locality—in fact, of all the conditions under which it is originated—must, however, precede rational preventive measures. Hence it is necessary that the following measures should be adopted:—

1. All cases of sickness occurring among the parochial poor in each district should be periodically reported to the medical officer of health, and tabulated statements concerning them forwarded to a central office in London, in which such statistics, along with those from other sources, should be analysed, summarised, and published. Schedules might easily be arranged similar to those in force in Christiania or Berlin, in which a weekly return of the new cases of sickness among the poor could be made by the Poor-law medical officer with a minimum of trouble. The cases in the workhouse infirmaries and in industrial schools should be similarly scheduled. Care would be required to prevent the same cases from being entered more than once. It may be mentioned that it has since 1879 been incumbent on all district and workhouse medical officers, and upon medical officers of district schools appointed since that date, to furnish the medical officers of health with returns of pauper sickness and deaths; but as the chief object of these returns appears to have been the notification of infectious diseases, the returns have been in most places allowed to lapse, and have not, I believe, been used for general statistical purposes.

2. All cases of sickness, whether out-patients or in-patients, at hospitals (general and special) and at public dispensaries should be reported weekly or monthly to the medical officer of health, and by him forwarded to the central office in London, to be there treated like the pauper statistics. The hospitals and dispensaries of this country are supported by subscriptions or bequests, and they owe it to the State to furnish the fullest particulars which the latter may require. Every public institution for the treatment of the sick should, I maintain, be required to give to the medical officer of health a weekly statement of the number of new in-patients and out-patients treated during the week, specifying the age and sex and nature of the illness of patients; also a quarterly or annual statement of the total cases, and the number of days spent by each patient in the hospital. The statistics of large general hospitals, especially those to which medical schools are attached, are of great value, the diagnosis and certification being exceptionally accurate. I have recently shown that the statistics of the chief metropolitan hospitals give a faithful index of the yearly incidence of rheumatic fever in London, and the same must be true for many other diseases. It will hardly be credited that several of the large metropolitan hospitals, as University College, London, and Guy's Hospitals, publish either very imperfect or no tabulated statistics of annual cases of sickness. At the Edinburgh Infirmary such records were only commenced in 1889, while in other hospitals in various parts of the country accurate statistics have been kept for a long series of years, as at Aberdeen, Glasgow, York, Bradford, Brighton, and many other places. It should be made obligatory on the managing bodies of all general and special hospitals and all public dispensaries to keep accurate entries of all cases treated at these institutions, and to report on special schedules these cases to the medical officer of health at stated intervals. What has been done in Germany can be done here, and as they followed our lead in respect of

[9] Milroy Lectures on the Natural History of Rheumatic Fever, 1895.

registration of deaths it is for us now to follow them in registration of hospital and other forms of sickness. The question of hospitals would not be complete without reference to the special hospitals now established in most towns and districts of England for the isolation and treatment of infectious diseases. Many important problems as to the intensity of different epidemics, the relative fatality of cases occurring in different districts, the influence of "hospitalism" on the character of each disease, &c., might be solved by accurate comparative statistics for the great fever hospitals throughout the country. At present there are statistical reports for such hospitals in the annual reports of some medical officers of health of very varying comprehensiveness and value. What is required is that these should be formed on a uniform basis, and that the statistics from different hospitals should be analysed and published at a central office in London. It is but fair to mention here the extremely valuable reports of the statistical committee of the Metropolitan Asylums Board. The year 1894 was the ninth year of issue of this report, which is in some respects a model for others. I may also mention here the statistics in the same report as to lunacy and imbecility in the asylums and schools of the Board, which it ought to be practicable to compare with those of other similar establishments throughout the country. The lunatic asylums for each county form another field for collective investigation, which can only be fully utilised by analysis and tabulation of statistics at a central office.

3. All friendly societies and all sickness insurance societies of every description should be required to furnish weekly or monthly returns of the number of new cases of sickness in their experience, classified according to a specified schedule, and a yearly statement of the total subscribing number of members, classified according to age.

4. An attempt should be made to obtain accurate returns of sickness in the great industries. This can only be gradually secured. Two factors are necessary in order that industrial sickness may be estimated for comparative purposes: (*a*) an accurate return of the number of men employed in each industry; and (*b*) a similarly accurate return of the cases and causes of sickness, each classified according to age. Some important steps have been taken in this direction in the Factory and Workshop Act, 1895, which will come into operation on Jan. 1st of next year. By Section 34 it is required that:

> The occupier of every factory and workshop shall, on or before the 1st day of March in every year, send to the inspector of the district on behalf of the Secretary of State a correct return specifying, with respect to the year ending on the preceding 31st day of December, the number of persons employed in the factory or workshop, with such particulars as to the age and sex of the persons employed as the Secretary of State may direct, and in default of complying with this section shall be liable to a fine not exceeding £10.

There is, however, no provision requiring a general notification of sickness among the employés, although this would be quite practicable. The only approach to it are the enactments contained in Sections 20 and 29. Section 20 states that:

> 1. Every occupier of a factory or workshop shall keep a register of accidents, and shall enter therein every accident occurring in the factory or workshop of which notice is required by the Factory Acts, within one week after the occurrence of the accident, and this register shall be at all times open to inspection by the inspector and the certifying surgeon for the district.
> 2. If any occupier of a factory or workshop makes default in complying with the requirements of this section, he shall be liable on summary conviction to a penalty not exceeding £10.

This enactment will doubtless be of great value in determining the relative liability to accidents of different industries, and the directions in which additional regulations and restrictions are required. Section 29 requires that:

> 1. Every medical practitioner attending on or called in to visit a patient whom he believes to be suffering from lead, phosphorus, or arsenical poisoning, or anthrax, contracted in any factory or workshop, shall (unless the notice required by this section has been previously sent) send to the Chief Inspector of Factories at the Home Office, London, a notice stating the name and full postal address of the patient, and the disease from which, in the opinion of the medical practitioner, the patient is suffering; and shall be entitled in respect of every notice sent in pursuance of this section to a fee of 2*s.* 6*d.*, to be paid as part of the expenses incurred by the Secretary of State in the execution of the principal Act.
> 2. If any medical practitioner, when required by this section to send a notice, fails forthwith to send the same, he shall be liable to a fine not exceeding 40*s.*
> 3. Written notice of every case of lead, phosphorus, or arsenical poisoning, or anthrax, occurring in a factory or workshop, shall forthwith be sent to the inspector and to the certifying surgeon for the district; and the provisions of the Factory Acts with respect to accidents shall apply to any such case in like manner as to any such accident as in those sections mentioned.
> 4. The Secretary of State may by order made in accordance with Section 65 of the principal Act apply the provisions of this section to any other disease occurring in a factory or a workshop, and thereupon this section and the provisions referred to therein shall apply accordingly.

While in full sympathy with the object in view in Section 29 of the Factory and Workshop Act, 1895, an earnest and emphatic protest must be urged against the machinery and the destination of the notifications proposed in this section. As I have elsewhere stated,[7] it constitutes a new departure, that of compulsory notification of disease by a medical practitioner to a layman. It involves a most pernicious procedure, one not only fraught with serious direct and indirect detriment to the medical profession, but also detrimental to the object in view, as it involves, in some degree at least, the investigation of the causation of special diseases—a medical problem—by lay inspectors. The medical officer of health is in virtue of his special training and profession the person to whom these diseases should be primarily notified, and who should guide the remedial measures to be taken. In a letter[8] Dr. Russell, the distinguished medical officer of health of Glasgow, after referring to and endorsing the above-quoted remarks, states: "Apart from the principle, the method of this Act is absurd." He then quotes the following paragraph from a statement submitted (unsuccessfully) to Mr. Asquith by the Police Commissioners of Glasgow during the committee stage of the Factory and Workshop Bill, 1895: "The medical practitioner will form an opinion that his patient suffers from poisoning or anthrax before he arrives at any conclusion as to its cause. This presumes an inquiry into circumstances, and the conclusion may possibly not be one which will make the practitioner any more popular in the locality if he promulgates it. Let every such case be notifiable to the medical officer of health of the district as if it was an infectious disease. Let the medical officer of health make the inquiry, and if he believes the disease was 'contracted in any factory or workshop,' let him at once inform the local factory inspector."

I will now sum up. What is advocated is that:

1. All cases of sickness treated at the expense of public funds, whether in connexion with the administration of the Poor-law (out-door infirmaries, industrial schools, &c.) or in isolation hospitals, or in idiot and lunatic asylums, should be periodically notified to the medical officer of health.

2. All cases of sickness treated by means of public charity, whether in general or special hospitals, or dispensaries, should be similarly notified.

3. All cases of sickness treated in friendly societies or other sickness assurance societies should be similarly notified.

4. Returns of accidents and of certain diseases, as lead poisoning, woolsorters' disease, &c., or other industrial diseases, should be made part of a wider system of notification of diseases by private medical practitioners to the medical officer of health of each district.

5. The schedule of notifiable diseases under the Infectious Diseases (Notification) Act should be widely extended. Diseases should be classified into those compulsorily notifiable (1) within twenty-four hours, and (2) weekly, and the list of the latter should be greatly increased; they should include pneumonia, rheumatic fever, phthisis, and other diseases, as lead poisoning &c.

6. In connexion with this extension of notification the whole question of payment of fees for notifying will require complete reorganisation.

7. All notifications of sickness should be sent in the first instance to the medical officer of health of each district, and by him transmitted to a central office in London.

8. The central office in London should probably be in connexion with the General Register Office, Somerset House, and weekly returns of sickness should be published alongside of the weekly returns of mortality. The most urgent of these reforms is the collection and tabulation of the cases of sickness attended at the expense of the public funds or treated in public charitable institutions. This might be begun almost immediately. 'The only obstacles are the *vis inertiæ* of the responsible heads of Government departments and the expense that would be incurred. Successive Secretaries of State have committed themselves to the principle of the proposal, and there is reason to hope that strenuous action and agitation on behalf of this proposal by the Royal Statistical and other allied societies would secure the desired end. I can conceive of no work more important in conducing to the

[7] Brit. Med. Jour., Aug. 31st, 1895. [8] Ibid., Sept. 10th, 1895.

progress of both curative and preventive medicine than that which I have briefly described; it is a work of national importance, and the obtaining of this additional information for every district and town, with the present staff of medical officers of health eager to avail themselves of it, would undoubtedly be followed by marvellous improvements in the public health.

INTESTINAL OBSTRUCTION DUE TO FÆCAL ACCUMULATION ASSOCIATED WITH DISPLACED KIDNEY.

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IN THE LANCET of July 21st, 1894,[1] I described four cases in which the above connexion of events occurred, and since then I have met with three more cases in nearly all respects similar.

CASE 1.—The patient was a woman aged sixty years, multipara, thin, active, healthy, neurotic, and subject to constipation, but not in the habit of taking aperients. I was called to see her as she was suffering from acute abdominal pain, which came on after an indigestible meal. The pain was referred to the region of the transverse colon and the back. Vomiting occurred, but did not relieve the pain. An aperient medicine which she had taken failed to evacuate the bowels. I found a large oval swelling with smooth outline occupying the right hypogastric and iliac region, decidedly tender on pressure. Under the influence of opiates and fomentations and starvation the pain subsided in two days, and the bowels acted copiously by the help of enemata. As the patient recovered the swelling diminished considerably, and she was found to have a displaced, slightly movable, but not enlarged, right kidney. After a few months orders to attend to the evacuation of the bowels were neglected, and a similar but slighter attack occurred. On this occasion the accumulation in the colon was smaller, and, as the patient recovered, the kidney was found to be in the same condition and position as after the former attack. Constipation continues in this case and has to be treated by regular aperients.

CASE 2.—The patient was an unmarried woman aged forty-seven years, well-nourished, of neurotic type. When first seen by my partner, Dr. Mackern, in my absence, she was found to be suffering from general abdominal pain, which was largely pelvic. The abdomen was large and generally tender, a large mass being clearly felt in the right iliac region. A ring-pessary in a foul state and rough from wear, which she had worn on account of some uterine displacement, was removed, but no relief was given. It was ascertained that she had suffered from displacement of the right kidney before this illness. The pain now centred in the mass on the right side, and the temperature was raised from 100° to 101° F. and night perspirations occurred. By the action of opiates and laxatives the pain was reduced and the bowels evacuated, and after an illness of about ten days the patient was convalescent, and the right kidney was found to be displaced, somewhat enlarged, lying in the right iliac region, and the greater mass which had existed in that region had disappeared.

CASE 3.—The patient was a woman aged sixty-five years, multipara and very thin, with weak muscular system and highly neurotic. She had been subject for many years to irregularity of the action of the bowels, slightly to constipation, but more especially to recurrences of "diarrhœa" with lumpy stools. She had known of the existence for a long time of a painless lump in her right side about two inches from the umbilicus; this lump used to slip away from her hand as she felt it. Dr. Mackern saw this patient also in my absence, and found that for a few days prior to his visit the lump had become larger and more tender, and there had been a tendency to diarrhœa alternating with constipation and lumpy stools. There was little or no pain in this case. Aperients and olive oil brought away copious evacuations, with diminution in the size of the mass and relief of all discomfort. Abdominal massage and the regular use of cascara sagrada kept the bowels free, and it became clear that the fæcal accumulation had disappeared, and a movable right kidney, not tender, was left.

There are thus in these two series of cases—seven in all—with very similar symptoms, progress, and, I think, causation. Six had somewhat acute symptoms of obstruction, and the seventh a nearly painless attack of obstruction, with looseness of the bowels due to fæcal accumulation. All of the seven were in women, whose ages ranged from forty-two to seventy-two years. Four were multiparæ and three were spinsters. Out of the seven, four were decidedly subject to constipation, and the other three were not liable to any intestinal disorder other than attacks of abdominal pain or recurrences of so-called "diarrhœa." If, in these seven cases, the connexion between displacement of the right kidney and fæcal accumulation in the right half of the colon be one of cause and effect, there seems to be no reason why one should look for any influence other than a mechanical one. A very slight degree of pressure, especially of a kind which was not uniform, on the lumen of the large intestine would suffice to arrest partially the upward passage of its contents. No doubt in most cases of disturbance of the functions of the abdominal viscera the aid of the sympathetic nervous system may be called in for the purpose of explaining such disturbances, often wrongly. Here, as in many others, a simple anatomical explanation is forthcoming, and mechanical pressure may be set down as the efficient cause. But, seeing that the nerve-supply of the right half of the colon and that of the supra-renal body and kidney is derived from the outer side of the solar plexus, and that the nerves to the supra-renal body are large and directed horizontally outwards, it is not unreasonable to suppose that the alteration of the position of a displaced kidney may interfere with the nerves of the organ in a way which will communicate itself to an organ whose nerves arise from a neighbouring part of the great plexus, which presides over so many viscera. Whatever form the interference with the nervous apparatus of the colon should take, whether inhibition of its normal peristaltic action over several inches of its length, or over-stimulation of that peristaltic action, the ultimate result would probably be the same—viz., stasis of the contents of the ascending colon, or hepatic flexure of the colon. The fact that many displaced kidneys give rise to no symptoms does not disprove this suggestion as to a connexion through the renal and supra-renal plexuses and the superior mesenteric plexus, for many displaced kidneys are tender and somewhat enlarged for a short time only, and this tenderness is little recognised or attributed to its real cause, the influence through the nerve-relation only taking place during those periods of tenderness and enlargement. In this suggestion of a nervous disturbance, radiating from one viscus to another through the somewhat abused sympathetic nervous system, one may be following out a wrong as well as an unnecessary track, when mechanical pressure alone is to blame for the obstruction of the intestine. But whatever theory we may form as to the nature of the causation, the practical rule to be applied to such cases is clear—viz., that the patient be instructed to attend systematically to the action of the bowels as long as she or he lives.

Blackheath.

WORD-BLINDNESS AND VISUAL MEMORY.[1]

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THE subject of this paper is one to which there is but scanty reference in English medical literature. My attention was specially drawn to it on meeting with the very interesting case which forms the basis of this communication. After spending considerable time and labour in searching out similar cases scattered throughout French and German medical literature, it occurred to me that it might prove useful to others to focus the results of my studies and personal observations in a paper, especially since the subject, though one of intense interest both from a medical and a psychological point of view, has received but little attention in this country. The following is the history of my case of word-blindness.

A man aged fifty-eight years has always enjoyed good health with the exception of occasional attacks of bronchitis

[1] A paper read at a meeting of the Glasgow Medico-Chirurgical Society on Oct. 4th, 1895.

in winter. He is a teacher of French and German, and is a man of intelligence and education. Of recent years he has had a large amount of mental work, and before his present visual difficulties appeared he had considerable mental worry. He first came under my notice on Aug. 29th, 1894, and gave the following history. About one month previously he was greatly startled to find that one morning in his own house he could not read the French exercise which a pupil gave him to correct. On the previous day he had read and corrected the exercises just as usual. Greatly puzzled he went into an adjoining room, and having summoned his wife, he asked her if she could read the exercise. She read it without the slightest difficulty. He then took up a printed book to see if he could read it, and found that he could not read a single word. He remained in that condition until I saw him. On examining his visual acuity with the test types I found that he was unable to read even the largest letters of the test types. He informed me that he could see all the letters plainly and distinctly, but could not say what they were. He made the most absurd mistakes, and only very rarely, after guessing several times, did he hit upon the proper name of the letter. What attracted my special attention was the fact that he read at once the number standing at the top of each paragraph of the test types. I found on examining him further with figures that he did not experience the slightest difficulty in reading any number of figures quite fluently and without making any mistakes whatever. He could read figures printed on the same scale as Jaeger No. 1, the smallest of the test types, and from other tests it was evident that there was no lowering of his visual acuity. His inability to read was thus manifestly not due to any failure of visual power, but to a loss of the visual memory for letters. The page of a printed book appeared to him exactly as it appears to a person who has never learned to read. He sees each individual character distinctly enough, but the character is no longer a visual symbol, as he no longer remembers the special significance attached to it. His difficulty with written characters was equally well marked, and it was the same for Latin and Gothic characters. He is ignorant of music, and I therefore could not test his power of reading musical notes. To put it briefly, he had lost the visual memory of all the printed and written characters with which he was previously familiar. He could, however, write with perfect fluency and ease to dictation, although afterwards he could not read what he himself had written. No other mental defect could be ascertained on the most careful examination. He spoke as fluently as ever, nor had he since the beginning of his attack ever experienced the slightest difficulty as regards speech. His mental powers were as vigorous as ever, nor was there any defect of memory apart from the loss of memory for the visual symbols of language. I was struck with the fact that in trying to read he always carried the book well to the left hand, and could not see it at all when carried to the right. On examining his visual fields with the perimeter there was found loss of the right half of each visual field—i.e., he had right lateral homonymous hemianopsia. No other defect could be found, and the fundus of each eye was perfectly normal on ophthalmoscopic examination. His general health was good, and with the exception of atheromatous vessels there was no evidence of disease present on the most careful examination of all his organs. I have had this patient under constant observation during the last thirteen months and saw him last on Sept. 27th. His general health has remained good during that period. No new mental symptoms have arisen. He informs me, however, that his memory is not quite as good as it used to be, and that this is particularly noticeable in the case of proper names. The right homonymous hemianopsia remains practically the same. With regard to his power of reading there has been a slow but steady improvement during the last six months. During the first six months his condition in this respect was stationary, but during this period I had advised mental rest, and he had made no attempts at reading unless when I examined him now and again. About six months ago, however, I advised him to begin to learn to read. He began by learning the alphabet and spelling through a child's primer. He practised daily, and at the present time he can read, but only slowly and laboriously, spelling out the words letter by letter like a child. In the alphabet at the beginning of his primer he has underlined the letters which gave him difficulty, putting a double line below those which gave him most difficulty. On asking him to read he does so slowly, spelling out each word letter by letter. He makes many mistakes, particularly with the letters which he has underlined in the alphabet. His behaviour is exactly that of a child learning to read. Meeting with the letter F, for example, he hesitates, begins to run over the alphabet from A to F, and then he recognises the letter as F. Meeting with Y, he hesitates for some time, although he says almost at once this is the last letter but one of the alphabet. However, giving him plenty of time and with occasional mistakes, he is now able slowly and laboriously to spell out printed matter. One point very observable in his reading is that he has no difficulty with some short, familiar words. *The*, for example, he always recognises at once without requiring to spell it out letter by letter. This point was also noticeable in a case recorded by Badal which I shall mention later. Badal's explanation seems a very reasonable one—viz., that such familiar words form, as a whole, a picture or graphic unity which is instantly recognised without it being necessary to analyse it into its constituent letters. With regard to written symbols, my patient has not made such marked progress. I tested him on Sept. 2nd last with very clear and distinct handwriting. He could only read a word here and there, and had great difficulty in recognising the letters. The explanation, I think, is very simple. During the last six months he has been reading printed characters every day, while he has not practised constantly the reading of written characters, but only tried it occasionally. This is a point of great interest—the comparative fluency with which he now reads printed as compared with his difficulty with written characters, and the fact that he has been practising constantly the reading of printed but not of written characters. His power of reading figures fluently remains as before. With regard to his power of writing to dictation, he writes as fluently and rapidly as he ever did. He does not spell quite so correctly as he did previously, and his handwriting, though quite legible, is not so good as it was previously to the onset of his word-blindness. The patient himself seeks to explain this by lack of practice in reading and writing during the last thirteen months, and no doubt this is an important factor; but another factor is to be found in the word-blindness, the patient being unable to read what he himself has written, and, therefore, gaining no help from vision in the spelling of the words and the formation of the letters. He is much in the same position as a man writing with his eyes shut.

It was Kussmaul[2] who first clearly pointed out that blindness for words is capable of being met with clinically as an isolated condition, and that it represents the pathological condition of a special faculty. He invented the term "word-blindness" for the condition in which the patient, though not blind, is unable to read visible words. Since Kussmaul's treatise our knowledge of the condition has been greatly increased by the numerous cases which have been reported. It is now evident that the terms "word-blindness," "cécité verbale," and "Wortblindheit" are not sufficiently precise without further definition. There are different forms of word-blindness which must be carefully distinguished from one another. The case just reported is really one of letter-blindness—i.e., the inability to recognise individual letters. In my case the inability embraced all the different forms of letters known to the patient—Gothic and Latin, written and printed. This is not always so. A few cases have been recorded where the visual memory lost for one alphabet was preserved for another. Michel[3] quotes a case where the patient could read the Gothic but not the Latin characters. Charcot[4] had a case where a patient knowing French, German, Spanish, Latin, and Greek lost the memory of a few of the Greek and German characters only. Mierzejewski[5] has recently described a new form of word-blindness which he has proposed to call "cæcitas syllabaris et verbalis, sed non litteralis." The patient could recognise the individual letters and name them, but he could not unite them into syllables and words. Badal[5] has reported a somewhat similar case which merits more detailed description. The patient could see and name each individual letter, but could not combine these even into the simplest syllables or words. A few words she was able to recognise and pronounce, but these were such as were familiar to her from frequent

[2] Disturbances of Speech, Ziemssen's Cyclopædia, 1877, vol. xiv.
[3] Berger: Les Maladies des Yeux dans leurs Rapports avec la Pathologie Générale. Paris, 1892.
[4] Clinical Lectures on Diseases of the Nervous System, vol. iii., New Sydenham Society's Series.
[5] Archives d'Ophthalmologie, March-April, 1888.

repetition—for example, her own name. Badal's explanation is that such familiar words form a graphic unity, a form picture, which can be recognised at once without resolving it into the individual letters. Badal traced her inability to read to a loss of the sense of space. Although in a given word she saw and could name the individual letters, she did not appreciate their relationship to one another. She could repeat the letters in each word, but not in their proper sequence. She could thus name any individual isolated letter, but when several letters were combined into a word she could not read it, because she could not perceive the relative order in which the letters were placed.

It is thus evident that the terms "word-blindness" and "alexia" are not sufficiently precise. The inability to read may be due to the inability to recognise the individual letters, cæcitas litteralis, or to an inability to combine these into syllables and words, cæcitas syllabaris et verbalis. My case affords a remarkably pure example of cæcitas litteralis, or inability to recognise the individual letters.

One feature of this case to which I wish to direct particular attention is the fact that this patient could read figures as fluently as ever; indeed, it was this feature which first made me suspect that it was a case of word-blindness. On trying him with the test types I was at once struck with the fact that although he could not read a single letter, he read without hesitation the number standing at the top of each paragraph of the test types. I then tested him further with large combinations of figures, and all these were read with the greatest fluency and without any hesitation whatever. This is a point in these cases which has not met with the attention it merits. In the vast majority of the recorded cases of word-blindness no mention whatever is made as to the ability to recognise figures. In the thesis of Mdlle. Nadine Skwortzoff[6] amongst fourteen cases of word-blindness collected by her only one occurs where it is stated that the power of recognising figures was preserved. On quoting this case she remarks that generally we find no difference in word-blindness as to the reading of figures and letters. Cases, however, do occur where the ability to recognise figures remains intact, and that more frequently than was previously supposed. I have met with five recorded cases in addition to my own. In the case of Mierzejewski, already quoted, the patient could recognise and read figures even when these were combined in the most complicated manner. In a case very similar to my own, reported by Brandenburg,[7] the patient suffering from word-blindness and right lateral hemianopsia could recognise and read figures. Brandenburg in his paper quotes a case reported by Joly where the patient suffering from agraphia and word-blindness could recognise figures and also write them. In a case reported by Dejérine[8] the patient was totally word- and letter-blind with right homonymous hemianopsia, but he retained the power of reading figures and could do mental calculations as well as formerly. Alfred Binet[9] has presented us with a very interesting aspect of this same question from another point of view. In his interesting psychological study of MM. Inaudi and Diamandi, who have recently startled the scientific world by their great feats in mental arithmetic, Binet points out that whilst their memory for figures had acquired an abnormal extension, which excited astonishment and admiration, the other forms of memory—e.g., that for words—presented nothing special, and, in fact, in some respects they were below normal. In the case of Diamandi, his extraordinary memory for figures was a purely visual memory. When he learned a series of figures by looking at them for a moment he could repeat them in any order. He explained the mental process by saying that he actually had a precise mental picture of the figures with all their peculiarities of printing and even of colour. His visual memory for figures was so exact as to resemble a mental photograph, which he could read off at leisure, as he would from the page of a book. Yet his visual memory for words was by no means above normal. Experience thus clearly proves the complete independence of the visual memories of letters and figures, for, as we have seen, the one form of visual memory may be lost whilst the other remains intact, and the one form may be developed in excess whilst the other is even below the average.

Another very interesting form of loss of visual memory is that of loss of the visual memory for musical notes—note-blindness. This is a subject which until quite recently had scarcely met with any attention. Professor Edgren of Stockholm has very recently published a striking paper,[10] in which he gives fifty-two cases collected from various sources in which the power of musical expression was partially lost, and which he has designated by the term "amusia." Professor Edgren regards the following conclusions as admissible from the study of the fifty-two cases: (1) that a pathological process can cause partial or total loss of the power of musical expression—amusia; (2) that the various forms of amusia possess a certain degree of clinical independence in their relation to each other and to aphasia; (3) that the clinical forms of amusia appear to be analogous to the clinical forms of aphasia and are often, but not necessarily, accompanied by the analogous form of aphasia; (4) that amusia can exist without aphasia and aphasia without amusia; and (5) it is probable that certain forms of amusia possess an anatomical independence, the region affected being near to but not identical with, that affected in the analogous form of aphasia. Of the different forms of amusia described in this paper one of the most interesting is note-blindness—i.e., loss of the visual memory for musical notes. The patient can see the notes as usual, but has no longer the faintest idea of their significance. This is very frequently associated with another form of amusia, tone-deafness, where the notes are heard, but simply as sounds, without the patient being able to assign them to their position in the musical scale. From the proximity of the visual and auditory centres it is easily understood how these forms are frequently associated together, just as the analogous conditions word-blindness and word-deafness. But note-blindness also occurs as an isolated symptom, there being no other impairment of the patient's powers of interpretation or expression of musical sounds, and the patient being able to read all other printed and written symbols. The patient can read the words of a song, but can no longer read the accompanying music. Word-blindness is very frequently accompanied by note-blindness, but not always, the patient sometimes retaining the power of reading musical notes. It is evident, then, that the visual memory for musical notes is quite distinct from the visual memory for words and letters, since the one form of visual memory may be entirely lost whilst the other is not changed or modified in any way. For illustrative cases I would refer to Professor Edgren's paper.

The following case, which has come under my observation, affords another excellent example of partial loss of visual memory. The loss of visual memory was also associated with right lateral homonymous hemianopsia, just as in my case of word-blindness.

The patient, a married woman aged thirty-eight years, consulted me on Nov. 23rd, 1888, at the out-patient department of the North Riding Infirmary, Middlesbrough, when I was acting there as resident surgeon. She gave me the following history. Twelve months previously she had fallen down in a fit, and for some time afterwards had some loss of power in her right side, and some slight difficulties in speech. During the last three months she had suffered greatly from headaches, which were always worse at night. But it was her visual troubles about which she had come specially to consult me. She was constantly running up against people in the street and against objects such as chairs in her own house. What distressed her even more was that she could no longer find her way about the town. When she went out she could see the houses and streets quite plainly, but she no longer recognised them. She could no longer recognise her own street by sight. She only lived a short distance from the infirmary, but could not come to it alone. She was in the same position as a complete stranger, although she had lived in the town for many years. What was still more distressing to her was that she was quite helpless in her own house and could not do her own household work. She had completely forgotten where things were placed, and most of her time was occupied in looking for the various household articles. The history of running up against people and objects at once suggested an examination of her visual fields. It was found that there was a right lateral homonymous hemianopsia, loss of the right half of each visual field. Unfortunately she was illiterate, so that I could not test her visual acuity by reading the test types. By employing other tests, such as her power of picking up exceedingly minute objects and of recognising dots, &c., it was evident that the visual acuity

[6] De la Cécité et de la Surdité des Mots. Paris, 1881.
[7] Graefe's Archiv für Ophthalmologie, 1887, Abtheilung iii.
[8] Comptes-Rendus des Séances de la Société de Biologie, Paris, March, 1892.
[9] Psychologie des Grands Calculateurs. Paris, 1894.
[10] Deutsche Zeitschrift für Nervenheilkunde, Dec. 14th, 1894.

in the left half of each field was exceedingly good. The hemianopsia, then, was quite insufficient to account for her visual difficulties. It was evidently a form of mind-blindness, a loss of the visual memory for places. There being a history of syphilis, she was put upon specific treatment. Her general condition greatly improved, her headaches and speech troubles disappeared, but when I last saw her, after three months' treatment, the hemianopsia persisted, and she had still the same difficulties as regards the visual memory for places.

Charcot[11] relates a case in some respects similar to the preceding, but in which the loss of visual memory was much more extensive. Charcot's patient was a highly educated and accomplished man in whom the visual memory had been very highly developed. After a time of great mental worry and anxiety, with loss of appetite and sleep, he was astonished to find that a sudden and profound change had come over him. At first everything was confusion, and the patient feared that he was threatened with some form of mental derangement. In every instance the memory of form and colour had completely disappeared, yet he could perceive them when present without difficulty. Like my patient, the monuments, houses, and streets of the town he dwelt in seemed all strange and new to him. Every time he returned to it, after an absence, it seemed as though he had arrived there for the first time. He could not draw the simplest object from memory, although he used to draw fairly well. When he now tried to draw objects from memory he produced only a shapeless scrawl. He had also lost the visual memory of colours. He found the visual recollections of his wife and children impossible, and even when they were before him their faces seemed strange to him. There was only very partial mind-blindness, he having a difficulty in recognising a few letters of the Greek and German alphabets. His eyes were examined by Parinand and found to be normal.

A very interesting case of object-blindness associated with word-blindness, followed by post-mortem examination, has been recorded by Sérieux.[12]

A female aged sixty-two years had a stroke in 1888, followed by paralysis, and had another attack in June, 1890, with epileptiform convulsions and hallucinations of hearing. When examined on Dec. 16th, 1890, word-blindness and agraphia, and also word-deafness and paraphasia, were found to be present. She was also found to be suffering from marked object-blindness, which was exhibited by the inability of the patient to recognise her relatives and friends when they called upon her. Their faces and figures seemed to her to be quite changed, and, as she expressed it, all the people about her seemed to be wearing masks. This object-blindness, although best marked in relation to faces, was also manifested in relation to the familiar objects about her, although to a less extent. A few months afterwards she died from pneumonia. On examination of the brain a bilateral cortical lesion was found. On the left side there was a softening in the supra-marginal convolution, and also a limited patch of softening in the posterior extremity of the first temporal. On the right side there was a large patch of softening involving the angular and supra-marginal convolution and also the posterior extremities of the first and second temporal convolutions.

I have quoted these additional cases in order to make the conception of the visual memory more complete. But what is meant by the terms "memory" and "visual memory"?

It is customary and correct to employ the term "memory" in a general sense to express the power, which all rational beings possess, of preserving and of reproducing impressions previously received. In psychology up till recent times memory was regarded as a special faculty and as an indivisible unity. But the new psychology, expounded with lucidity by Ribot[13] and by Binet,[14] teaches that the word "memory" is simply a general term reducible to particular cases, that such a unity as memory does not exist, but that individual memories do exist—e.g., memories of vision, of hearing, of taste, of smell, of movements, and so forth. The facts of mental physiology and pathology have clearly shown that we must not regard the memory as a single faculty having a definite location in the brain. The memory is really the sum total and result of a number of distinct mental processes. There exist partial, special, or local memories, each of which has its own special domain—all of which have intimate connexions with one another, yet possess an independence of each other such that one of these special memories can be enfeebled, lost, or developed to an abnormal degree without any of the other forms necessarily presenting any corresponding modifications. These special or local memories are both motor and sensory. Of these the sensory memories form a most important group. Each organ of sense has its cortical centre in the brain, where not only fresh sensory impressions are received, but also previous sensory impressions are stored up and linked with associated sense impressions stored in other centres. Our primary and most simple ideas of objects are formed by the revival in our minds of these sensory memories.

The member of this group which concerns us is the visual memory. There is in the cortical centre of vision situated in the angular and supra-marginal convolutions a storehouse of past visual impressions. These can be called into the sphere of consciousness at will when we form what we call a mental picture, or, according to the French nomenclature, a visual image. To put it concisely, the visual memory means the power of preserving and of recalling to consciousness past visual impressions. It is only through the help of this visual memory, of this storehouse of past visual impressions, that we can interpret the fresh visual impressions that are constantly passing to the brain. Sweep away the visual memories or images from the brain, and you have the condition commonly known by the term "mind-blindness." In this condition the object is seen, but there is no intelligent perception of it. There are no past visual impressions to compare it with, and through the medium of the visual memory to arouse the other sensory and motor memories regarding it. Hence the object, though seen, has no significance whatever for the mentally blind. Mind-blindness, then, is simply loss of visual memory. We must carefully distinguish between simple perception of an object and an intelligent knowledge of it. If retina, optic tract, and percipient centre in the occipital lobe are intact, then we shall be conscious of the image of any object which falls upon the retina, and may assign it to its proper position in the external world. But we may have no intelligent knowledge of it. The visual memory centre must be communicated with, the present visual impressions must be compared with similar past visual impressions, and through the medium of the visual memory we arouse the other sensory memories regarding it, all of which are closely associated. The visual memory, then, plays a most important part in every conscious exercise of the vision. But it is evident from the study of the facts of mental pathology that this visual memory is not a unity. We have seen that the visual memories for words and letters, for numbers, and for musical notes have a functional independence of each other. Each group of visual memories may be entirely lost, whilst the others remain intact and unaffected in the slightest degree. Hence we are led to infer that they must possess an anatomical independence. We can as yet only localise the visual memory of words and letters, but from the frequency with which these three groups of visual images are simultaneously lost we can infer that the regions affected, though not identical, are probably very close together. Further, these three groups have this in common, that they are highly specialised visual memories, requiring for their retention in the brain a considerable amount of mental concentration and education.

There are other groups of visual memories which are not so highly specialised, and for the acquirement of which comparatively little mental concentration or special training is necessary. The visual memory of form and colour, of objects and places, furnishes us with a mental picture gallery which enables us to find our way with unerring accuracy through the intricate streets of a great city, which enables us to recognise a friend after the lapse of years, and which puts us in an intelligent relationship with the objects around us in our daily life. That this form of visual memory is distinct from the highly specialised visual memories of words, numbers, and musical notes is clearly shown by the clinical evidence. Word-blindness and note-blindness are but seldom accompanied by any impairment of this larger group of visual memories. We have seen, as in Charcot's case, that a great impairment of this group of memories may exist and yet the patient be able to read and write. Further, this form of mental blindness for form and colour, for objects and places, is of great rarity, whereas the loss of the highly specialised visual memories is comparatively common. I would thus divide the forms of visual memory into two main groups:

[11] Loc. cit.

[12] Comptes-Rendus des Séances de la Société de Biologie, Paris, Décembre, 1891.

[13] Les Maladies de la Mémoire. Paris, 1895.

[14] La Psychologie du Raisonnement. Paris, 1886.

first, a group of highly specialised visual memories for the acquirement of which great mental concentration is necessary, and which are possessed only by those specially trained; and, secondly, a group of visual memories for form and colour, for objects and places, for the acquirement of which no great mental effort is required, and which are possessed by all men who have the sense of vision. We are led to infer from the complete functional independence of these two groups of visual memories an anatomical independence, and a plausible suggestion has been offered as to why the loss of the first group should be comparatively common as compared with the loss of the second.

The organs of sense that are concerned in the reception and interpretation of speech are represented bilaterally in the cerebral cortex. Since each eye and each ear are connected with both hemispheres destruction of the cortical centre in one hemisphere will not make the patient deaf in one ear or blind in one eye. Destruction of one occipital lobe causes, as we shall see, a homonymous hemianopsia only. But with regard to language the education of these sensory centres is unilateral. In the auditory and visual centres of one hemisphere only are the sensory impressions of language, visual and auditory, retained and stored up. The hemisphere selected is always that in which are situated the motor centres for speech and writing. It is thus the left hemisphere in right-handed people and the right in left-handed people. A lesion on one side of the brain, in the vast majority of cases on the left side, may completely obliterate the visual word memories and make the individual word-blind. The visual memories of numbers and musical notes are also probably unilateral and in the immediate neighbourhood of the word centre, for, as already pointed out, all three groups of visual memories are frequently lost together. It has been suggested that the second group of visual memories—those of objects, of places, of form, and of colour, which do not require such an effort of attention and concentration—are efficiently imprinted and stored up in the higher visual centres of both hemispheres. Hence it would require a bilateral lesion to produce object-blindness, and hence, as can be readily understood, its much greater rarity. The case of Sérieux, already quoted, supports this view, where the patient suffered from word- and object-blindness, and where, after death, was found a bilateral lesion in the brain involving the left supra-marginal convolution and the right angular and supra-marginal convolutions. This, however, is a subject which is by no means settled and which awaits further investigation.

A notable feature in both my cases of loss of visual memory was their association with right lateral homonymous hemianopsia. This condition also existed in Charcot's case of word-blindness, already referred to. According to Charcot, a similar hemianopsia associated with word-blindness was to be found only in one other observation, that of Westphal.[15] Since then, however, many cases have been recorded, and I am able to quote nine additional cases. Two cases have been recorded by Samelsohn,[16] two by Wyllie of Edinburgh,[17] and two by Henschen of Upsala.[18] One case has been recorded by Brandenburg,[19] one by Dejérine,[20] and one by Bruns and Stoelting.[21] In all these cases word-blindness was associated with right homonymous hemianopsia. As we have cases of word-blindness without right hemianopsia, and as we have right hemianopsia without word-blindness, it is evident that the cerebral centres for the right halves of both visual fields and for the visual memory of words must be distinct from one another. Yet these symptoms are associated with such frequency as to lead to the inference that the cerebral centres or the paths to them must lie in close proximity to one another. We shall see that pathological evidence confirms the inference drawn from clinical experience.

The question of the exact localisation of the visual centres in the brain has given rise to considerable controversy in the past. For a considerable time Ferrier and Munk carried on a discussion on this subject. Ferrier originally held that the cerebral centre of vision was situated in the angular convolution, and Munk that it was in the convolutions in the posterior part of the occipital lobe. Recent clinical and pathological observations[22] are reconciling these apparently antagonistic opinions by showing that both Ferrier's centre and Munk's centre have important parts to play in the function of vision. It has already been pointed out in this paper that in the act of vision we must distinguish between the mere perception of an object, as occupying a certain position in our visual field, and an intelligent knowledge of it, as to its exact nature and qualities. Although the boundaries of the visual centres cannot as yet be laid down with precision, yet the mass of pathological evidence tends to show that the occipital lobe, especially in the neighbourhood of the cuneus and the calcarine fissure, is the centre for primary visual impressions, the perceptive centre, and that in the angular convolution and its neighbourhood there is a centre of a higher nature, one of whose functions seems to be the storage of the visual memories of things and words, the visual memory centre. It is evident from what has already been said that the functional activity of both these centres must be called into play in every conscious and intelligent exercise of vision. It is now a matter of general agreement that the primary visual centre in the occipital lobe is connected with the half of the retina in each eye, the left occipital lobe with the two left halves and the right occipital lobe with the two right halves. But since the left half of each retina corresponds to the right half of each visual field a lesion in the left occipital lobe would produce blindness in the right halves of both visual fields, or, in other words, a right hemianopsia. The hemianopsia is termed homonymous because it is on the same side in relation to both eyes. A lesion of the right occipital lobe would produce left homonymous hemianopsia. To put it concisely, destruction of the primary visual centre in the occipital lobe produces homonymous hemianopsia in the opposite half of the field of vision. It is also known that a lesion in any part of the optic tract from the cerebral cortex to the optic chiasm will produce homonymous hemianopsia.

In my case of word-blindness, however, there are two points which lead us to infer that the lesion causing the hemianopsia is in or near the cortex. 1. When a beam of light fell upon the blind half of each retina the pupil contracted actively, just as when it fell upon the seeing half. Wernicke first pointed out that if there be loss of the reflex movement of the pupil, when light is thrown upon the blinded portion of the retina, the break in the conduction must lie below the spot at which the fibres to the oculo-motor nucleus are given off—i.e., it must lie in the optic tract itself. This valuable diagnostic symptom has been called Wernicke's hemiopic pupillary reaction. But when, as in my case, the pupillary light-reflex is intact, the lesion is to be located higher up, in the internal capsule, the optic radiations, or in the cortex of the brain. 2. The association of the hemianopsia with word-blindness, which is known to be always dependent on a cortical or sub-cortical lesion, leads us to infer that the right homonymous hemianopsia is due to a lesion in the cortex of the occipital lobe or of the optic radiations passing to it. The frequent association of right homonymous hemianopsia with word-blindness, already referred to, thus confirms the results of pathological experience, that the centre for the visual memory of words is in the neighbourhood of the left occipital lobe.

Although its boundaries have not yet been finally laid down, still a constantly increasing pathological experience[23] tends to prove that the centre in which are stored the visual memories of letters and words includes the supra-marginal and angular convolutions, both of which belong to the inferior part of the parietal lobe. Pathological experience also shows that the more important part of the centre is situated in the angular convolution, which is bounded posteriorly by the occipital lobe. It has already been pointed out that the visual centre forms no exception to the law that with regard to language the education of the motor and sensory centres is unilateral. The hemisphere selected is always that in which are situated the motor centres for speech and writing, hence in right-handed people, forming the vast majority of cases, the visual memory centre for letters and words is situated on the left side of the brain in the region already described. This centre in the left angular gyrus and neighbourhood is

[15] Zeitschrift für Ethnologie, 1874.
[16] Berliner Klinische Wochenschrift, No. 21, 1882.
[17] Disorders of Speech, 1894.
[18] Klinische und Anatomische Beiträge zur Pathologie des Gehirns. Upsala, 1893-94.
[19] Loc. cit. [20] Loc. cit.
[21] Neurologisches Centralblatt, Nos. 17 and 18, 1888. Leipzig.

[22] Henschen: loc. cit.; and M. J. Déjérine and P. Sérieux: Comptes-Rendus des Séances de la Société de Biologie, Paris—a series of papers during the years 1891 and 1892.
[23] Skwortzoff, loc. cit.; Henschen, loc. cit.; and Déjérine and Sérieux, loc. cit.

connected with both occipital lobes, hence destruction of the left occipital lobe causes right homonymous hemianopsia, but not word-blindness, since the right occipital lobe is still connected with the visual word centre in the left angular gyrus. To have complete word-blindness the centre itself must be destroyed or its connexions with both right and left occipital lobes must be cut off. The visual word centre is supplied with blood by the sylvian artery, and it is a significant fact that all the cerebral centres concerned either in the expression or in the interpretation of language are situated within an area supplied by the same vessel. The speech-motor centre, the graphic centre, the auditory word centre, and the visual word centre are all supplied by branches of this sylvian artery, hence it is easily understood how disturbances of all the centres or some combination of them are so frequently associated; further, in consideration of the immediate proximity of the visual and auditory word centres, the auditory being in the posterior part of the first convolution of the temporo-sphenoidal lobe, it is manifest how the symptoms of word-blindness and word-deafness are associated with such great frequency. My case of word-blindness is a pure example of the rarer condition of isolated lesion of a single centre, all the other centres concerned in language being intact. The patient could speak, write, and understand spoken language as well as ever he did.

I have dwelt particularly on the fact that my word-blind patient could write fluently to dictation, although he could not read what he himself had written. The old explanation put forward to account for such cases was that by constant and prolonged practice the motor images of writing had become so deeply imprinted upon the graphic motor centre (in the second frontal) that without any aid from the visual centre the revival of these motor images was quite sufficient to guide the hand to form the letters correctly. It has been shown, however, by the recent observations of Déjérine and Sérieux[24] that when the visual word centre is destroyed the patient can neither read nor write. He is agraphic because he can no longer call up in his mind the visual memories of letters which are necessary to stimulate the graphic motor centre. How, then, are such cases as mine to be explained where there is complete word blindness without agraphia, and where the patient can write fluently, although he may not be able to read a single word of what he has written? It is now maintained that in such cases the visual word centre is intact, and also its connecting path with the graphic motor centre, but that the pathways connecting the primary visual or preceptive centres in both the occipital lobes with the visual word centre in the left angular convolution are cut across. Hence the visual memories of words and letters can still be revived from within, and serve as a guide to the graphic motor centre; but impressions from without from the preceptive centres can no longer reach the visual word centre because of the interrupted pathways. Such an explanation is in perfect harmony with the facts observed in my case. I found that the patient, even when unable to read a single letter, still possessed the power of calling up at will the visual images of all the letters. He informed me that when I mentioned any letter he could mentally see it just as well as ever he could. Hence the patient could write because he had still the power of reviving the visual images of letters, and to accomplish this the centre itself must have been intact. How, then, could he no longer recognise these same letters which he had written? Because the visual word centre was cut off from the primary visual centres in the occipital lobes, and hence could not be reached by any visual stimulus from the external world. I would refer particularly to a case recorded by Déjérine[25] in which the post-mortem examination supported in a very striking manner the view expressed above. This case is particularly interesting, as it presents almost the identical group of symptoms which were met with in my case of word-blindness.

Déjérine's patient was a man sixty-eight years of age who, after a number of attacks of tingling in the right arm and right leg, suddenly perceived that he was unable to read a single word. Although word-blind he could write as fluently as ever. He could copy correctly pages of manuscript, although he could not read a word he had written. He had also lost the power of reading musical notes (note-blindness), but he could still sing well. He could read figures and do mental calculations just as well as ever. On examination with the perimeter he was found to be suffering from right homonymous hemianopsia. Ten days before his death he was suddenly seized with paraphasia and total agraphia. There was no muscular paralysis, and his intelligence remained clear until his death, which occurred suddenly. On examination of the brain there was found (1) an old lesion, a softening which had destroyed the cuneus and some of the neighbouring convolutions of the left occipital lobe and had extended deeply into the white matter so as also to cut across the fibres passing from the right occipital lobe to the left angular convolution—this old lesion thus accounted satisfactorily for the hemianopsia and for the word-blindness without agraphia which had persisted for four years; and (2) a recent lesion—viz., a softening of the left angular and supra-marginal convolutions, which explained the recent appearance of the total agraphia. The paraphasia was probably caused by disturbance of the auditory word centre, which is in the immediate neighbourhood. For other illustrative cases I would refer to the papers published by Déjerine and Sérieux, to which I have already called attention.

It is thus evident that in my case the word-blindness and the right lateral homonymous hemianopsia may be accounted for by a single lesion. We have seen that interruption of the optic radiations as they pass to the occipital cortex produces a lateral hemianopsia, just as when the occipital cortex is destroyed. A subcortical lesion in the white matter of the left occipital lobe, so situated as to cut across the fibres passing from both occipital lobes to the left angular gyrus, would render the patient word-blind but not agraphic. As such a lesion must involve the optic radiations passing to the left occipital cortex, the patient would have at the same time right homonymous hemianopsia. As to the probable nature of the lesion, the absence of all signs of disease, with the exception of atheromatous vessels, and the non-progressive course after the lapse of thirteen months would suggest as the most probable condition a spot of softening due to hæmorrhage or thrombosis. One of the most interesting features in this case was the slow but gradual improvement of the patient, which I have already described in detail. In most of the recorded cases of word-blindness, unfortunately, there is no account of their after history. In the after histories which are given the patients seem only very rarely to have recovered the power of reading. We know that in aphasia, particularly in youthful patients, the power of speech is sometimes recovered even after complete destruction of the speech centre in the left side of the brain. That the recovery in these cases is due to education of the corresponding centre in the opposite side is, I think, demonstrated by Barlow's[26] case of cerebral lesion, first in the left third frontal convolution and then in the corresponding convolution of the right side.

The patient, a boy suffering from heart disease, had first an attack of aphasia due to embolism in the artery supplying the left third frontal convolution. He speedily regained the power of speech by training the corresponding right third frontal convolution. A second embolism plugged the artery supplying this convolution also. The patient had a second attack of aphasia, which, however, was permanent. Have we in the patient who forms the subject of this paper a case of education of the corresponding centre in the opposite side of the brain, or is it that the interrupted paths have been repaired, or that new communicating paths have been found leading to the word centre in the left angular gyrus, which we regarded as still intact? I offer no definite opinion, and our knowledge is as yet too imperfect to dogmatise. I content myself with enumerating three striking facts: (1) the permanence of the hemianopsia, which is practically the same as at the outset of the attack; (2) the slow and gradual acquisition of the knowledge of printed letters, but only after persistent education and practice; and (3) the comparatively slight improvement in the knowledge of written letters, the study of which has not been carried out with the same steady perseverance.

In conclusion I would ask, Why have we such scanty records of cases of mind-blindness, or, as I prefer to designate them, cases of loss of visual memory? I venture to affirm that through lack of knowledge the true nature of such cases, when they do occur, is very frequently not

[24] Déjérine and Sérieux, loc. cit.

[25] Comptes-Rendus des Séances de la Société de Biologie, March, 1892.

[26] Brit. Med. Jour., vol. i. 1877.

recognised. I would urge the most careful examination of all patients suffering from visual derangements where there are no ocular changes to account for them. It is only by the painstaking analysis of symptoms and the careful recording of such cases, followed, where possible, by pathological examination, that we can hope to gain any further knowledge of the complex cerebral processes involved in vision, of which at present we can only form a very faint and imperfect conception.

ON THE TREATMENT OF IMPACTED FRACTURE OF THE NECK OF THE FEMUR BY BREAKING DOWN THE IMPACTION UNDER ANÆSTHESIA.

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IN THE LANCET of Nov. 17th, 1894, I called attention to the unsatisfactory result which attends the usual method of treating impacted extra-capsular fracture of the neck of the femur. This consists in simply keeping the limb at rest, no attempt being made to correct the characteristic deformity—the shortening and eversion (rarely inversion) of the limb, always present in a greater or less degree—for fear that if the impaction is broken down the fracture will not unite. The result is that the patient remains with the limb shortened and everted, and consequently more or less crippled for the remainder of life. A case of this injury occurring in a male aged twenty-seven years was described, where the fragments were loosened by forcibly breaking down the impaction under anæsthesia, and, the shortening and eversion having been corrected, perfect union took place without any deformity resulting. Three cases have since been treated according to the same method in the Manchester Royal Infirmary (two under my own care and one under my colleague, Mr. Whitehead) with satisfactory results, especially as regards the correction of the eversion, and as the patients were aged respectively fifty, sixty-five, and seventy-five years, a brief record of each may, perhaps, be interesting, for they illustrate the fact that advanced age is in itself apparently no bar to this procedure, the fracture in each instance readily uniting with an abundant formation of callus after the impaction had been broken down.

CASE 1.—A woman aged seventy-five years was admitted to the infirmary under my care on Dec. 20th, 1894. She was examined on admission by Mr. J. H. Ray, house surgeon, who found that the right lower extremity was shortened to the extent of an inch and a quarter and well everted; the trochanter was thickened; crepitus was absent, and the limb could not be inverted. The patient having been anæsthetised the fragments were loosened by Mr. Ray, who felt the bone give way with a "crunching" sound; the limb could then be inverted and moved freely about a point just internal to the great trochanter. A straight splint reaching from the hip to the ankle was bandaged to the outside of the limb, and extension was applied in the usual way by means of a weight (8 lb). As some slight chest symptoms developed the patient was allowed to sit up in bed after a few days, and at the end of three weeks she was placed on a couch during the daytime with the limb between sand-bags, the extension being only applied at night. On Feb. 5th she went home. The limb was shortened to the extent of about half an inch and was very slightly everted. As she lay in bed she could flex the thigh to an angle of 45°, and the movements at the hip-joint were quite free. With support she was beginning to bear her weight on the limb and walk about the ward.

CASE 2.—A woman aged fifty years was admitted to the infirmary under my care on July 2nd, 1895. On examining her the following morning I found that she presented all the usual signs of an impacted extra-capsular fracture of the left femur—viz., shortening to the extent of about half an inch with slight flattening over and thickening of the trochanter in an antero-posterior direction, also marked eversion, the toes pointing directly outwards. There was an absence of crepitus. Attempts to correct the deformity by rotating the limb inwards caused great pain and produced no effect. Under anæsthesia the impaction, which was very firm, was broken down with a grating sound, though it was not until the thigh had been flexed to an angle of 45° and the knee bent to a right angle that enough force could be brought to bear upon the limb to loosen the fragments sufficiently to completely correct the eversion. On making traction upon the leg after the fragments had been loosened it could be restored to the same length as the other. A Liston's long splint was bandaged to the outside of the limb and extension (9 lb.) applied. On July 29th the splint and extension were removed and the limb was fixed in a plaster-of-Paris bandage. When this was taken off at the end of a month the fracture was firmly united without any perceptible shortening or eversion of the limb. The movements of the hip-joint were quite free, and in the course of a few days she was able to walk without assistance.

CASE 3.—A man aged sixty-five years was admitted to the Infirmary on Sept. 8th, 1894, under the care of Mr. Whitehead (who has kindly allowed me to include the case with the preceding). On examination the left lower extremity was found to be shortened to the extent of two inches; there was well-marked eversion, which could not be overcome by ordinary passive movement; crepitus was absent; and the trochanter was thickened. The patient having been anæsthetised, the impaction was broken down by Mr. J. W. Smith, resident surgical officer, assisted by Mr. Ray, and, the deformity having been corrected, the limb was fixed on a Liston's long splint, with 5 lb. extending weight. The patient was kept in the recumbent position, which was well borne, until Oct. 1st, when the splint and extension were removed; it was then found that firm union had taken place, the limb being very slightly everted and shortened to the extent of three-quarters of an inch. It was put up in a plaster-of-Paris bandage, and the patient left the hospital on Oct. 4th. He has since resumed his former occupation, that of a waiter, and though he walks with a limp and the limb slightly everted, wearing a thick sole to the boot, he is able to rotate the foot inwards and has good movement in the hip-joint.

I am indebted to Mr. Ray for notes of Cases 1 and 3.

Manchester.

MORTALITY FROM EMPYEMA IN CHILDHOOD.

BY LEWIS W. MARSHALL, M.D. ABERD.,
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THE publication of the interesting statistics by Mr. Wightman in THE LANCET of Nov. 30th, 1895, has induced me to collect the cases of empyema which have been under my own care since May, 1879. The statistics alone, when read in connexion with the paper referred to, must be of value, because the percentage of recoveries at all ages is more favourable than in the lists supplied by Mr. Wightman. All my cases have been treated by free incision with the exception of two, where, owing to the grave condition of the child and the extent of the effusion, it was deemed to be wiser to relieve the chest by a limited aspiration some hours before proceeding to free incision. This I believe to be a very useful precaution, it being impressed very much on my mind in the case of an adult female who had an enormous left-sided collection after parturition. The total number of my cases was forty-five, the deaths being seven. In the foregoing list I find that only seven cases were under three years of age, and of these two died, one child being a year old and the second a year and nine months. The method of treatment in every case may be briefly summarised as follows: (1) free incision; (2) a single tube in infants, but a double-barrelled tube in all above the third year; (3) the complete emptying of the chest of fluid for the first week twice daily by turning the child on to his side as one would empty a barrel, this being assisted by an effort of coughing when the child is old enough to understand what is needed; (4) the early removal of the tube—i.e., at the end of the first week; and (5) allowing the patient to sit up and move about as soon after the first week as possible, thus helping the expansion of the lung. I may here add that I have never found it necessary to remove a portion of a rib in an acute case.

In connexion with the deaths the following facts are distinctly noteworthy: (1) that with one exception all the

fatal cases were those of effusion on the *left* side—this is very interesting, and confirms the belief held by some that left-sided pleuro-pneumonia is always more dangerous to life than when it occurs on the right; (2) in all there was a long history of illness before admission, varying from six weeks to three months; (3) in one gangrene of the lung was believed to exist, but this could not be proved post mortem; (4) of the two deaths occurring in children under two years of age, one was the direct sequence of chicken-pox, and in both the children were rachitic to a degree; and (5) one case suffered from thrombosis of the left iliac vein six days after operation, and he died on the eighth day.

The deductions I would draw from these facts are as follows: (1) that free incision when done early is very successful; (2) that the removal of a portion of a rib is never necessary in acute cases; and (3) that a fatal issue at any age is rather the result of the neglect to recognise the true nature of the case than from the operation itself.

Nottingham.

CURRENT FROM THE MAIN.

BY W. S. HEDLEY, M.D. EDIN.,

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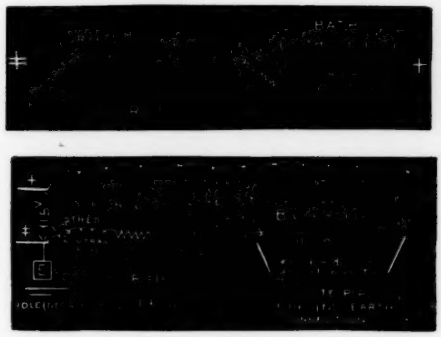
SINCE the publication under the above heading of two articles on the utilisation of public supply currents for electro-therapeutic purposes[1] great progress has been made in the supply of electricity from central stations. The same interval has brought forth a variety of apparatus as well as a somewhat extensive literature bearing upon the points in question; but it cannot be said that by any writer has there yet been shown a complete grasp of the subject, nor by any instrument have the many serious difficulties of the case ever been adequately met. In view, however, of the great and increasing employment of these currents, and with an experience of their usefulness in medicine, the time seems to have arrived for a complete survey of the whole problem; and the following remarks offer themselves as an attempt at its solution.

Considering the improvement that has taken place in public supply currents, I am of opinion that for medical employment their chief danger now lies, not in the possible influx of strong currents or in the chances of a failure of supply, but in leakage currents and in the breakdown of transformers, and of these risks the greater is leakage.

1. *Leakage currents.*—This source of danger has hitherto been either under-estimated or completely ignored, but it is nevertheless a very serious one, and in the absence of suitable precautions may lead to accidents of a grave kind. Those stations which supply by direct distribution, or distribution from transforming centres, are undoubtedly, and for obvious reasons, more subject to earth leakage than are those in which transformers are used at or near the house. Again, stations supplying electricity on the three or five wire systems, even if they do not actually connect to an earth plate or water pipe, are likely to have the middle wire (the "neutral") at practically earth potential. It is true that any connexion to earth of a main supplying current direct to houses is forbidden by the Board of Trade, but when, for purposes of its own, it suits a company to earth its middle wire this regulation does not seem to bar the practice. Now, if under these circumstances the patient be placed in contact with one of the outer mains (positive or negative) what may be expected to happen? If the connexion to earth be good, even a damp floor, such a patient would be subjected to the full pressure of supply, usually 100 volts or more. It is obvious that if the contact be of low resistance (for instance, if the patient be in an uninsulated bath) the resultant current through the patient's body might be one of considerable and even dangerous magnitude, perhaps approaching 400 milliampères. It would be useless to interpose resistance between the patient and the uninsulated (neutral) pole, as this portion of the circuit would be shunted by the leakage current, and if the milliampère meter was also placed in this portion of the circuit it would fail to register any of this leakage. The following diagrams[2] will serve to illustrate the electrical conditions that exist—for example, in a bath—when an earth connexion is made.



There is one "series" R = 80 and there are two parallel branches (R = 600 + 2 + 10 and R = 1). Then the total resistance $= \frac{612 \times 1}{612 + 1} + 80 = 80{\cdot}998$, and the total current $\left(\frac{115}{80{\cdot}998}\right) = 1420$ m.a. Of this total the body will take an average of 25 per cent.[3]—that is, it will receive 355 m.a. The current in the respective parallel branches will be as 612 : 1—in other words, the milliampère meter will register 2·3 m.a. Had the patient been placed in contact with the uninsulated (neutral) wire and the resistance been interposed between him and the insulated pole (positive or negative) he would not, even if placed in an uninsulated bath, have been in the circuit of any earth current. This would hold good only so long as the condition of the mains was good. Should a fault break out on one of the outer wires (positive or negative) the state of affairs would be in no way different from the case just considered. What, then, is the remedy for this risk? Clearly insulation. It should be taken as an axiom that the current from public supply mains should *never* be applied either as a shunt or direct to the patient without interposing between him and the earth an insulating substance of such a nature as would undoubtedly stand the full main pressure across it without passing a current of 1 m.a. In the case of three wire systems the "full main pressure" would be double that of supply, and in five wire systems four times that of supply. This necessity for insulation would apply equally to all systems, whether continuous or alternating, direct or transformed. In the usual electrical applications security would be attained by standing on a very dry floor or, more certainly, on a varnished kamptulicon mat. But in the case of the water bath, connecting as it does with a good earthing device in the shape of waste pipes and water pipes, the case is altogether different, and certain additional precautions then become necessary. With these duly carried out effective insulation can certainly be secured. In the first place it is obvious that the bath should not be made of metal. Hard wood or porcelain are suitable materials, the latter by preference. The bath should stand upon glass mushroom insulators filled with a heavy resinous oil (similar to those used for insulating storage batteries) or it might be placed upon hard vulcanised rubber blocks. The inlet stopcocks for both hot and cold water should be placed some distance from the bath, and in such a position that it would be impossible for the patient, when in the bath, to accidentally make contact with them. An insulating piece of porcelain or vulcanised rubber should be inserted in both inlet pipes between the stopcocks and the bath. If the waste pipe be attached to the bath an insulating piece should be inserted as close to the bath as possible. But danger may be even more easily and effectually averted by fixing directly below the waste outlet of the bath

[1] Current from the Main. By W. S. Hedley, M.D., THE LANCET, Dec. 19th, 1891, and April 9th, 1892.

[2] These diagrams are only intended to show by an example the possible danger to a patient from leakage currents. 115 volts is the full pressure of the mains. The total current under the above conditions is 1420 m.a., and the resistance in the respective branches is 612 ohms and 1 ohm, and, as current is inversely proportional to resistance, the current in the circuit of high resistance (the galvanometer circuit) will be 2·3 m.a., and in the earth circuit 1417·7 m.a. But both circuits are common to the bath.

[3] My most recent experiments, shortly to be published, prove this—a conclusion in startling contrast with former surmises.

a shallow tank or sink to receive waste water from the bath, the waste pipe being attached to this sink. Neither the tank nor the waste pipe should make contact with the bath.

I have just read, and not without misgiving, the report of a discussion at the recent conference of the Board of Trade upon the question of raising the limit of low-pressure supply. It cannot be said that on this occasion the calculations of the commercial electrical engineer were hampered by any undue regard for the safety of human life. It was claimed by several of those present that they had received harmless shocks from what are now considered to be high-pressure circuits. One gentleman asserted that he had felt no ill effects from a 600 volt shock. In view of the fact that so much depends upon contact and the manner of taking a shock, and that little or no information was given on this point, it is difficult to form an opinion from such a statement. Did the gentleman in question touch one pole only of a 600 volt circuit? If so, what was the earth insulation of the other pole? Was his body in contact with the earth? Or, presuming that he simultaneously placed one hand on each pole of the 600 volt circuit, what was the surface area of skin contact, and what the condition of the skin? In the absence of information on these points the statement referred to cannot be considered to have any real value. Had the surface area and condition of the skin been favourable for a low resistance contact, it is more than possible that the gentleman in question might ere this have been "put to earth" in a sense other than an electrical one.

2. *Breakdown of transformers.*—The second source of danger (one which, of course, can occur only with transformed systems) is that due to the breakdown of the insulation between the primary and secondary windings of a transformer. This risk does not belong exclusively to alternating current systems. Continuous current transformers are now used in several public installations, notably at Oxford (1000 volts primary) and at Chelsea (500 volts primary). In the event of a breakdown of the insulation the secondary mains would have their potential above earth very considerably raised, and should it happen that there are weak places in the network of secondary (distributing) mains (of which the patient's body, unless well insulated from earth, would form one) an excessive current would pass, with probably fatal results to the patient. The Board of Trade regulations provide that every secondary circuit of a high-pressure main shall be fitted with an approved form of apparatus for automatically connecting the secondary mains to earth in the event of their potential above earth rising to a dangerous degree; but in this case there is the not improbable contingency that when the occasion for its action arises such an apparatus will be out of order, and, even if it be working well, it cannot act until the potential above earth of the mains has risen to this dangerous degree. And after that there is still an interval, short but quite appreciable, required for the action of the device in question. It must be borne in mind that during this time the excessive potential is acting upon the patient unless he be very well insulated, and, further, that it does not take long, with good contacts, to kill a man with 1000 or 2000 volts. What, then, are the precautionary measures here? Never to rely solely upon the insulation of the patient from earth when the supply is a transformed one, but always to place a substantially made transformer in the circuit. With alternating currents a "Woakes"[4] or "Miller and Woods"[5] transformer may be used; but it should be tested with at least the pressure of the primary mains between its primary and secondary windings before being installed for work. With continuous currents from a transformed system it will be well to interpose a motor, and make this drive by belt a small dynamo which should *not* be fixed on the same metal bed-plate. The dangers due to leakage and the breakdown of the transformer represent practically the whole of the difficulties that have to be contended with so far as the company's mains are concerned. The risks of failure of supply and serious rise of supply pressure need not, in the case of English companies at least, now be seriously considered. The companies for their own sakes take every possible precaution to guard against these accidents, and usually with complete success. Under any circumstances it is desirable to fix upon each pole of the electro-therapeutic circuit a reliable magnetic cut-out. The best apparatus of this kind is that known as the "Cunynghame," of which the following is a description. Two planished ends of a copper solenoid dip into two mercury cups forming the terminals of the instrument, and on the current reaching a predetermined amount the solenoid is "sucked over" (drawn back upon) a curved, soft, iron core-piece, the position of which is fixed but adjustable. The solenoid is fastened to one end of a radial arm which is pivoted at its lower end in such a way that a slight movement of the solenoid brings it vertically over the turning centre and into a position of unstable equilibrium; any further increase of current will cause the solenoid to drop by force of gravity and at the same time withdraw the contact points from the mercury cup, thus breaking the circuit. If desired, the mercury cup could be short-circuited by a resistance of such an amount as would reduce the current in the circuit to half or quarter of the breaking current. For example, let it be supposed that the magnetic cut-out has been set to break circuit at 200 m.a., and that the electromotive force of supply is 100 volts, then the resistance to the circuit must be $\frac{100}{.200} = 500$ ohms. Now, if the magnetic cut-out be short-circuited with a resistance of 500 ohms, the current, instead of ceasing altogether, would be diminished to $\frac{100}{500 + 500} = 100$ m.a.; or, if 1500 ohms be used as a short-circuiting resistance, the current would have been diminished to $\frac{100}{500 + 1500} = 50$ m.a. Where two magnetic cut-outs (one on each pole) are used it would be well to short-circuit both instruments with resistances, and to set one to act a little in advance of the other. Fusible cut-outs and lamps in the circuit have been recommended as safeguards, but it has been more than once pointed out by me in THE LANCET that at best such devices are unreliable for the purpose in question and may lead to the serious discomfiture of those who put their trust in them. It is well known that fuses cannot be guaranteed to act within 5 per cent. of their nominal current; it is necessary also to remember that even then they take quite an appreciable time to heat and melt. Again, the difficulty of obtaining small fuses of reliable gauge is greater than with fuses of larger capacity. With lamps the result is even more uncertain. The resistance of carbon diminishes as the filament grows hot until the state of incandescence is reached, after which resistance remains practically constant. Again, the temperature to which it is raised under normal lighting conditions depends entirely upon the efficiency (watts per candle) at which the lamp is intended to burn; therefore it is evident that as a fuse a lamp's breaking point must vary considerably. With high-efficiency lamps—i.e., with lamps which absorb small voltage for candle-power—the ratio between the nominal current and the fusing current will be less than with low-efficiency lamps. Used as a "backing" resistance—i.e., as a choking or current-reducing resistance of steady value—a lamp to ensure anything like reliability should have a considerable current passed through it—certainly full incandescence should be attained. As safeguards, therefore, for electro-therapeutic purposes fusible cut-outs and lamps are entirely out of the question.

Having cleared the ground of the only serious difficulties that lie in the way of utilising lighting currents, I hope to go on to consider their physical characters, their therapeutic qualities, and the control apparatus by which such currents may be best adapted to the varied requirements of practice.

[4] This instrument has on one bobbin three separate secondary coils; one supplies cautery, the second light, and the third gives current for application to the patient.

[5] This device is provided with a number of terminals on the secondary winding, such that any voltage from 2 upwards and any current up to 20 amperes can be obtained.

A CONTRIBUTION TO THE SURGICAL TREATMENT OF MALIGNANT DISEASE OF THE BREAST.

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THE published statistics of the results of the surgical treatment of malignant disease of the breast so plainly show disappointing results that little apology seems to be demanded for an attempt either to criticise the past or make suggestions for the future. It has become an acknowledged principle of the treatment that not only should the whole affected mamma

be freely and thoroughly excised, but that in addition a clean sweep should be made of its lymphatic connexions. It is unnecessary in this article to enumerate the pathological considerations which have led to the adoption of this principle, but it is very necessary to examine the question as to how far the principle has been applied to the practice now employed.

First, as regards anatomy. It is a matter of fact that efferent lymphatic vessels run from the axillary glands through the apex of the axilla into the posterior triangle, and after forming connexions with the glands therein finally enter the thoracic duct on the left side and the right thoracic duct on the right side. Moreover, superficial lymphatics from the skin covering the mamma track up over the clavicle to these same glands in the posterior triangle.

Now, to examine the practice. It is laid down that in primary malignant disease of the breast the axilla should be cleared out (after removal of the breast), whether the glands be visibly infected or not. Why? Because the fact that they are not affected macroscopically is no proof that they are not affected microscopically. And yet, in the face of the anatomical facts quoted above, it is not the usual custom or practice to go further. If it is wrong to assume that the axilla is free from disease because it shows no sign to the naked eye or finger, it is equally wrong to assume that the posterior triangle has escaped. If it is right and peremptory to clear the axilla, it is also right and peremptory to clear the posterior triangle. Still more is it inconceivable how the triangle can be left untouched if the axillary glands are found to be clearly affected at the time of operation.

It may possibly be objected that it is not feasible or is difficult to clear the posterior triangle. To this it can be replied that by a flap operation done a week or ten days after the primary operation a clean dissection can be made of the whole posterior triangle, that it is not difficult, and that it is quite feasible. A flap formed by a long incision down the sterno-mastoid muscle meeting an incision along the clavicle is detached as far back as the anterior border of the trapezius; this exposes the triangle, and the contents can be systematically removed with a little care and patience. By such means the acknowleged principle would be carried out as far as is possible, and if the principle is right it seems incumbent upon the surgeon to strive to apply it thoroughly in practice and not to be content with stopping half-way. It is not suggested that this is the best method of operating, and inasmuch as two cases only have been so treated, and those comparatively recently, no results of value can be produced. It is hoped, however, that this article will serve to ventilate the question as well as to point out that at present the practice appears to directly clash with the acknowledged principle.

Brighton.

BRITISH MEDICAL TEMPERANCE ASSOCIATION.—A meeting of the British Medical Temperance Association was held on Wednesday, Dec. 11th, at the London Temperance Hospital, when a paper was read by Dr. C. R. Drysdale on Therapeutics without Alcohol, in which he contended that alcohol was of little, if any, use in the treatment of disease. Sir B. W. Richardson, who presided, said that, in conjunction with the late Dr. Farr, he had found that more people were killed by alcohol than by phthisis. The discussion was continued by Dr. Norman Kerr, Mr. Hazel, Dr. Paramore, and Dr. Ridge, and a vote of thanks was accorded to Dr. Drysdale.

INFIRMARY MEDICAL SUPERINTENDENTS' SOCIETY. The December meeting was held at the infirmary of St. George's-in-the-East on the 14th inst., Mr. J. R. Lunn being in the chair. Dr. M. M. Bowlan (medical superintendent of St. George's-in-the-East) exhibited cases of Extensive Ulceration of both Feet; Suppuration of Knee-joint cured and perfect movement regained by draining and free irrigation; Congenital Heart Disease; Pityriasis Rubra; and Jaundice associated with Rupial Eruption. The question of a uniform diet for all workhouses within the metropolitan area was discussed and approved of, Mr. Walter Burney (Greenwich) pointing out that those houses which adopted a more liberal diet were favoured with the company of the professional workhouse loafer, who was a pest to society and made these institutions unendurable to the respectable poor. Various other administrative matters were discussed, and a vote of thanks to Dr. Bowlan for his interesting series of cases terminated the proceedings.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Prœmium.

MIDDLESEX HOSPITAL.

ACUTE PERFORATION OF AN ULCER OF THE STOMACH; LAPAROTOMY; RECOVERY.

(Under the care of Dr. W. PASTEUR and Mr. HENRY MORRIS.)

THIS case makes the eighth record of operation for perforation of simple ulcer of the stomach that we have published in the Mirror of Hospital Practice during the course of the present year. It was, however, the first of the series to be subjected to operation, and has probably been already referred to, although not previously published. It is a very important case, because it shows distinctly the local symptoms which may be present soon after perforation has taken place, at the stage, in fact, when morphia is so often given and much valuable time lost in consequence of the masking of symptoms which that drug produces. The absence of rigidity of the abdominal muscles when the girl was first seen, although there was already a loss of the liver dulness, should be especially noted; it was not long before this rigidity or "guard action" was found, but that it may be absent at first is an important observation. In the seven other cases referred to life was saved by operation in four cases, and in a fifth it was prolonged until the eleventh day. In all but one the perforation was of an ulcer on the anterior surface of the stomach. The fact which comes out most prominently in these records is the importance of early operation. The successful results were gained when there had been intervals of six, nine, nine, and thirteen and a half hours between the first symptoms and the operation, and death ensued when the intervals had been fourteen, nineteen, and nineteen and a half hours. This is a most striking fact, more strongly emphasised as the patient who only lived for ten days was the one operated on fourteen hours after the commencement of the symptoms. In the larger number it was possible to suture the opening in the stomach, but in one the tissues around the opening gave way, and it was necessary to excise the edges in order to reach healthy parts for the sutures. In one case a tube was passed into the stomach through the opening. For the notes of this case we are indebted to Mr. W. E. Hudleston, house surgeon, and Mr. John Murray, surgical registrar.

A young woman aged twenty-four years, single, presented herself at the out-patient department of the Middlesex Hospital on March 10th, 1894, at 3.30 P.M. She had enjoyed good health until two years ago, when she became subject to indigestion, which, however, had only given trouble during the preceding six months. The chief symptom was epigastric pain very soon after taking food and lasting for some two hours. During the previous three months there had also been sickness after food, sometimes on several successive days, and for the last six or eight weeks the patient had not touched meat or potatoes on account of the pain which followed. On one occasion, some four months previously, she vomited a small quantity of dark blood. The bowels had never given her any trouble. She had been under treatment for dyspepsia during the last few weeks. The patient was in her usual health on the morning of the 10th, and took boiled haddock at her midday meal (12.30). At 2.30 p.m., as she was hurrying upstairs, she was suddenly seized by a strong "drawing" pain in the lower abdomen. This rapidly increased in area and intensity, and by the time she reached the hospital, an hour later, had spread over the whole abdomen. She managed to walk to the hospital, about a quarter of a mile, but was doubled up with pain and felt faint. There was no vomiting. Her appearance when first seen did not in any way suggest the nature of her illness. As she lay on a couch in the out-patient room, with slightly flushed cheeks, without pinching of features or anxiety of expression, answering

questions readily in a clear voice, there was little to suggest acute perforation of the stomach. Physical examination of the abdomen, however, left little room for doubt as to the true state of things. There was slight uniform distension of the abdomen: the abdominal wall was quite flaccid, and gentle palpation could be borne without much pain The percussion note was everywhere tympanitic and the liver dulness was completely obliterated. The patient was at once removed to the wards, and when seen again an hour later her condition had already changed considerably for the worse. The face was now anxious and somewhat pinched, the abdominal wall had become rigid and acutely tender, the girth at the umbilicus was greater since admission by more than one inch, and pain was rapidly becoming more acute. At 6.30 P.M.—just four hours after the first onset of symptoms—Mr. Henry Morris operated. A median incision four inches long was carried from the costal angle towards the umbilicus. After dividing the superficial structures the peritoneum bulged up into the wound, and on being nicked allowed a quantity of offensive gas to escape. When the peritoneum was divided the distended colon presented in the wound. This was returned into the cavity, flat sponges were introduced, and the wound enlarged downwards to the umbilicus. On drawing the stomach up into the wound a perforation the size of a No. 12 catheter was brought into view. It was situated close to the pylorus on the anterior surface near the greater curvature. The ulcerated portion of the stomach was invaginated by means of eight Lembert sutures of No 2 silk, a second row of sutures being placed more superficially to strengthen them. The peritoneum was thoroughly irrigated with a 1 in 400 carbolic solution at 105° F., and the pelvis sponged out as dry as possible. The various peritoneal pouches were similarly dealt with. Much lymph was removed from the surface of the liver. The abdominal wound was closed with nine thick silk sutures, and the ordinary dressing applied. During the irrigation of the peritoneum the pupils became widely dilated, and there was a tendency to failure of respiration. Much difficulty was experienced in maintaining respiration for an hour or two after the operation. At 9.30 P.M. breathing was of the Cheyne-Stokes type, the pulse had improved considerably, and the temperature was 93°. On March 11th the patient had slept five hours and a half during the night. She complained of pain on respiration. There was no sickness. The temperature was 99·8°. She was ordered to take nothing whatever by the mouth; a morphia suppository was to be repeated if necessary, and a rectal tube to be passed frequently. On the night of March 11th the patient was sick twice and again four times on March 12th. The vomit was watery and bile-stained, but contained no blood. At 4 P.M. she was ordered one teaspoonful of hot water every hour. The pulse was 116, the temperature 99·6°, and the respiration 26. On March 13th there had been no more sickness. She was ordered two teaspoonfuls of hot tea and milk every hour. On March 14th a simple enema was administered. Her diet consisted of six ounces of tea and twelve ounces of hot water in the twenty-four hours. Nutrient enemata were ordered to be given every four hours. On March 15th urine was passed naturally for the first time. One teaspoonful of prepared meat juice every two hours was ordered. On March 18th the patient was improving steadily. The stitches were removed on this day. Two ounces of arrowroot every five hours were ordered. On March 22nd progress was uninterrupted. There was some distension, which was relieved by a rectal tube. On March 24th the wound was nearly healed. The patient left the hospital cured on April 7th. She came again to the out-patient department more than twelve months after the operation complaining of pain after food, which rapidly yielded to simple remedies. She stated that she had been perfectly well and strong ever since leaving the hospital.

Remarks by Dr. PASTEUR.—This case illustrates many points which have been emphasised by subsequent experience. The early recognition of the nature of the case and the prompt resort to operative procedure doubtless contributed in no small measure to the recovery of the patient. The diagnosis was made within one hour of the onset of symptoms, and before five hours had elapsed the perforation had been closed and the peritoneum thoroughly cleansed. The importance of an early diagnosis is self-evident, and with increasing knowledge of these cases this should become more and more easy of attainment. The value of "obliteration of the liver dulness" in this instance was manifest. Had this not been recognised when the patient was first seen the difficulty in making a diagnosis would have been much greater. The history and the mode of onset were, it is true, suggestive of the true cause; but in view of the complete absence of the pinched look of the face, of the tense, tender abdomen wall, and of all signs of general collapse, one might well have hesitated to give an opinion on the spot and felt disposed to watch the case awhile before making a definite diagnosis. I am doubtful, however, whether delay, even in such circumstances, could be justified. Personally, if in doubt at the outset of a case of this kind I would rather urge a patient to run the comparatively trifling risk of an exploratory incision than allow the time to pass by when an operation might have cured an otherwise necessarily fatal accident. Two other factors also doubtless contributed to the favourable result—the one, the good general condition of the patient, and the other the almost complete absence of the initial collapse which is so often met with in these cases. This last is probably a point of considerable importance in estimating the chances of success in any given case.

CHRISTCHURCH HOSPITAL, NEW ZEALAND.

INTERESTING SURGICAL CASES IN THE WARDS.

(Under the care of Dr. COURTNEY NEDWILL.)

WE are pleased to be able to bring before the readers of THE LANCET the notes of the following cases of successful surgery in the hospital of Christchurch. Hydatid disease is very common in the colony of New Zealand, and cysts have been met with in all the various internal organs. We can only suppose that the thyroid has escaped implication to the extent shown by Dr. Nedwill because of its comparatively small size. With regard to the size of stones which have been removed from the bladder by the suprapubic route during the life of the patient, we published in THE LANCET the account of a case under the care of Mr. Milton,[1] who extracted a stone, now in the museum of the Royal College of Surgeons of England, which weighed thirty-four and a half ounces by suprapubic cystotomy from the bladder of a fellah aged sixty. The man lived two months and a half and then died from kidney disease. Even this is exceeded by the case referred to in Ashhurst's "International Encyclopædia of Surgery," of which we have been recently reminded by Sir G. M. Humphry,[2] where a surgeon removed a stone weighing forty ounces and a half. The man did not survive more than eight days. It is to be expected that extraction of the larger stones should be more frequently followed by a fatal result, as their long sojourn in the bladder will have caused more extensive changes in the kidneys. When small ovarian tumours are attached by long pedicles they are difficult to diagnose from movable kidney, wandering spleen, and tumours of the omentum or intestine, or uterus. When larger, and there is likewise a considerable amount of free fluid in the peritoneal cavity, difficulty arises in another way, as it is often quite impossible to determine the exact nature of the growth, whether it is cystic or solid, &c., and the only way to make certain is to perform abdominal section. Those experienced in abdominal examinations can frequently make a shrewd guess, but short of operation there is little to help in the diagnosis between a moderate-sized sarcoma of the ovary, with multiple growths in the peritoneum, and a multilocular ovarian tumour of similar size one of the cysts of which has been slowly filling the peritoneal cavity with fluid after its unnoticed rupture.

CASE 1. *Hydatid cyst of the thyroid gland.*—A girl eight years old was admitted on July 1st, 1895, on account of a tumour occupying the central part of the thyroid gland. Her mother said she first noticed a lump in her child's throat about three years previously. During the last three months the child had had great difficulty in breathing, especially at night, frequently starting up in bed, throwing her hands about, and appearing as if she would be suffocated. After her admission she had several severe attacks of dyspnœa. On July 3rd she was placed on the operating table and an attempt made to anæsthetise her which had to be abandoned

[1] THE LANCET, Sept. 16th, 1893.
[2] THE LANCET Nov. 30th, 1895, p. 1342.

on account of impending suffocation. A hypodermic injection of cocaine was then made over the tumour, which was easily exposed by a short vertical incision. The pearly-white appearance of the cyst and the clear fluid drained off when it was incised suggested its nature. The lining membrane was removed by forceps and the edges of the opening in the cyst were stitched to the skin wound. On introducing the finger into the cyst it was found that it had insinuated itself all round the trachea. On July 29th she was discharged with only a very small sinus remaining unhealed.

Remarks by Dr. NEDWILL.—I can find only one other similar case reported—namely, by Wilks and Moxon—and as there was no mention of hydatids either by Mr. Butlin or the other members of the British Medical Association who recently discussed the subject of tumours and cysts of the thyroid gland, I take it that this case is of sufficient rarity to justify its publication.

CASE 2. *Large vesical calculus weighing only ten grains short of eleven ounces removed by supra-pubic operation.*—A man aged thirty-two was admitted to the hospital on June 3rd, 1895. Ever since he was fifteen he had suffered great pain and had had difficulty in passing urine. For the previous three years he had been quite unfit for work. On examination a very large stone was detected. The urine was very offensive and highly albuminous. The bladder was frequently washed out for a few days, and on the 9th, six ounces of boracic solution having been injected and a rectum bag introduced, the abdomen was opened above the pubes. The greatest difficulty was experienced in extracting the stone; the wound had to be enlarged, not only close up to the pubes, but upwards in the direction of the peritoneum. To prevent extravasation Dr. Nedwill had to insert fourteen or fifteen catgut sutures between the cut edges of the bladder and the abdominal wound. A drainage-tube was passed into the bladder, and irrigation was carried out sometimes twice, thrice, or four times during the twenty-four hours. On July 1st urine was passed for the first time from the urethra. During this month the patient had several rigors with high temperature—on one occasion a temperature of 106° F. was recorded. After July 1st urine ceased to come from the urethra till the 27th. These rises of temperature were apparently due to some small pocketing of pus between the bladder and the abdominal wall, as from first to last there was no extravasation of urine. On Aug. 1st the temperature was normal. On the 23rd a dry dressing was applied. On Sept. 7th it was reported that the patient sat up every day and the wound was healed. He was discharged on the 15th in excellent health.

Remarks by Dr. NEDWILL.—I am much indebted to Dr. Graham Campbell, who was acting for Mr. Murray-Aynsley, our house surgeon at this time, for the great care he gave this case during the after-treatment. Quite twenty grains extra were chipped off the stone during extraction. I have not the advantage of consulting a reference library, and cannot, therefore, say whether other stones larger than this one have been successfully operated for. A short time ago I read a report of a lecture by Mr. Christopher Heath, where it was mentioned that he had removed a stone of a similar size. Mr. Heath stated in his lecture that he had never had a more sultry Sunday afternoon's work than in removing it. In my case I can also say I never had a more sultry Sunday morning's work.

CASE 3. *Fibrous tumour of the ovary with a very long and narrow pedicle.*—A married woman aged forty-nine was admitted to the hospital on June 5th, 1895. She had been confined of her last child in 1877 and had, she said, inflammation of the bowels at that time as well as ten years previously to admission. The abdomen had been gradually enlarging since her confinement, but more especially during the previous twelve months. On her admission the abdomen was found to be very much distended with fluid, which was evidently in the peritoneal cavity. A tumour could be felt floating in this fluid and easily tilted far away from the finger in any direction. On the 9th the abdomen was opened; about two gallons of peritoneal fluid were removed, and a solid tumour weighing 1 lb. 8 oz., with a very long and narrow pedicle, was easily extracted. Only a few omental adhesions were present, and a single ligature was found sufficient for the small pedicle. The temperature remained normal throughout the after-treatment, and she was discharged on July 13th.

Remarks by Dr. NEDWILL.—Mr. Murray-Aynsley examined the tumour for me and reported it to be an almost pure fibroma with a minute cyst in its substance. I report the case as I understand it to be not very common.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Adjourned Discussion on the Possibilities as to the Latency of Parasitic Germs or Specific Poisons in Animal Tissues, as in Hydrophobia, Erysipelas, Syphilis, Leprosy, Ringworm, Tuberculosis, &c.

(Concluded from p. 1501.)

Mr. SPENCER WATSON said that in syphilis the persistence of glandular enlargement would lead to a suspicion that the disease was latent, and that therefore treatment should be prolonged. The virus of both pathogenic and non-pathogenic bacteria could be attenuated by sunlight, and something like this might happen in the case of patients who were sent to a sunny climate, though in the latter case the benefit resulted rather from increasing the resistance of the tissues of the patient.

Dr. LAZARUS-BARLOW said that he proposed to deal with the bacteriological aspect of the question, and with only one section of it. In pébrine the silkworm's egg after being laid was seen to contain germs of microbes. These would remain latent in the egg during the winter, although the temperature might be favourable to their development. When the egg began to germinate then the microbes increased in number until the caterpillar was fully developed. This fact illustrated that there was a certain something essential to the development of the microbe and which depended upon its environment. He, some time ago, came across a paper[1] in which was discussed a question whether plants could absorb nitrogen from the atmosphere when nitrogen was not presented to them in the soil. Two seeds were sown under these conditions; they put forth leaves which were green and turgid, but a total arrest of growth ensued for over two months. The arrest or growth of a plant or organism depended chiefly upon the conditions under which it found itself. The influence of environment was especially well seen in the case of the diphtheria bacillus, which was so fastidious as to require a certain particular amount of alkali in the culture medium. If the diphtheria bacillus were grown upon Lorrain Smith's serum, which consisted of sterilised blood serum plus alkali, the question whether growth started depended upon the length of time the serum had been sterilised and upon its non-exposure to atmospheric air. It was upon the culture medium that latency depended. In London all were probably almost equally exposed to infection with the tubercle bacillus. A would become infected and B not; this depended rather upon peculiarities of A and B than on the organism.

Dr. THEODORE WILLIAMS said that he found difficulty in distinguishing between latency and arrest in tuberculosis. By latency appeared to be meant the condition in which the virus was dormant, in arrest the virus might be dead. When could a case of tuberculosis be said to be arrested? He quoted the case of a man aged twenty-two years who was the subject of pulmonary tuberculosis, there being cavities in both lungs. Under favourable treatment the patient gradually recovered and became a short-breathed, stout man. Thirty-six years from the onset of the first symptom of phthisis, and sixteen from the last phthisical symptom, the patient died from non-tuberculous albuminuria, and at the necropsy the remains of a cavity were found in one lung surrounded by fibrosis, and in the other were the remains of a cavity together with a considerable mass of caseous material encapsuled by fibrous tissue. If this capsule had given way the patient might have died from miliary tuberculosis or from acute meningitis. One might truly say, call no man a case of arrested tuberculosis until he was dead. He referred to the following instances of tuberculous outbreaks after a period of latency: (1) a case of old pulmonary lesion which was quiescent was followed by acute head symptoms and death from tuberculous meningitis; (2) a patient with a cavity in the lung surrounded

[1] Annales de Chimie, 1856.

by fibrosis was placed under unfavourable hygienic circumstances and then tuberculosis developed at the opposite pulmonary apex; (3) tuberculous meningitis suddenly developed after old tuberculous osteitis of the vertebræ; and (4) tuberculous lymphadenitis of the neck, axilla, or elsewhere, remained quiescent, then a gland suppurating started acute miliary tubercle of the lung or tuberculous meningitis. The mediastinal and bronchial glands were especially apt to be invaded with tubercle after scarlet fever. There was danger following sometimes upon operation on chronic tuberculous lesions, and he referred to a case in which scraping of an axillary lymphadenitis was followed within forty-eight hours by the development of tuberculous meningitis elsewhere. He had met with a case of tuberculous pericarditis which followed upon an old lesion.

Sir WILLIAM BROADBENT said that in his opinion the papers had almost exhausted the subject, and very little room was left for the addition of new facts. The point of main interest to the society was to see that clinical cases could be explained by experimental investigation. He quoted a case in which a fall from a horse was followed by the development of acute tuberculosis. Latency might result from the encapsulation of the bacilli or their spores, or it might depend upon other circumstances in the environment. He had met with many cases in which the cause of typhoid fever could not be traced to any known cause during the usually observed period of latency or incubation. Cold or influenza frequently opened the door to typhoid fever by diminishing the tissue resistance of the individual; this was paralleled by experiments in animals. Injection of micro-organisms up to a certain dose might be followed by no infection, but if a non-infective dose were injected on one side and a dose of chloral were injected at the same time on the opposite side the animal would succumb. A somewhat similar state of affairs probably existed in the cases of scarlet fever following operation.

Dr. MANSON said that the causes of latency of disease and the conditions under which organisms became latent were various. In malaria the action of quinine did not kill the organism, but reduced its malignancy; warmth and good food acted in a similar way. The latency of the organism might be, so to speak, broken up by the action of adverse influences. A patient treated successfully for malaria in India when coming home might encounter bad weather in the English Channel; this would induce a fresh attack of malaria. The fungus which induced a particular form of itch in the tropics remained latent in the cold weather. Purely mechanical conditions of the parasite might induce symptoms, as when the filaria became rolled up and thus blocked the thoracic duct.

Mr. J. HUTCHINSON, jun., said that undoubtedly a few cases of syphilis, a very few, occurred in which the poison of the primary chancre remained latent for much over the usual period of time. Of this, one of the strongest examples was a patient at the Lock Hospital who was exposed to risk on Aug. 17th, a fortnight after which he came for an indolent inguinal bubo. The most careful search failed to discover any initial sore. He was again thoroughly examined on Aug. 31st, Sept. 17th, and Sept. 22nd, with the same result, no mercurial treatment being given. It was not till Oct. 5th—i.e., seven weeks after the solitary exposure to contagion—that an indurated ulcer developed close to the frænum, the bubo meanwhile having become still more characteristic. Secondary symptoms followed in due course. Such a case would make one less sceptical as to the tales of syphilitic "bubon d'emblée" in the male subject. It was possibly from prison surgeons and hospital physicians that the least doubtful evidence as to latency of primary syphilitic germs would be obtained. Aimé Martin observed the development of a hard chancre on the labium of a girl who had been for ten weeks isolated in the prison of St. Lazare. And as regarded the onset of secondary syphilis he could most positively confirm M. Diday's observation that an intercurrent illness might postpone it very considerably. M. Diday mentions two cases (one of typhoid fever and the other of pneumonia) in which the primary chancre had been contracted previously to the illness, whilst secondary symptoms did not appear for 120 and 160 days respectively. In two similar cases in which the patient had contracted an indurated chancre before or whilst sickening with typhoid fever Mr. Hutchinson had observed the syphilis "hang fire" until complete recovery had taken place from the typhoid fever—i.e., a period of from three to four months. As to the latency of tertiary symptoms the facts were too well known to require emphasis. For example, in a case he had published a man contracted syphilis at the age of twenty-one years, and after going through the ordinary secondary symptoms remained wholly free until the age of fifty-three years, when exposure to much privation was followed by the outbreak of multiple nodes of the skull, ischium, and humerus. Similar instances of long apparent latency were common both in acquired and inherited syphilis, and pointed to fresh activity of organisms which had remained in the tissues, though unfortunately the bacteriologist could not at present furnish any proof. Allusion was made in Mr. Lane's paper to the immunity from fresh infection or auto-inoculation during the primary stage. A remarkable exception occurred last year. A man under treatment with a hard chancre of the penis and inguinal bubo after six weeks inoculated one finger by accident, developed a chancre at this site, followed by swollen, hard, lymphatics up the arm, and large axillary glandular swelling. The patient had particularly severe secondary symptoms.

Dr. GEORGE OGILVIE said that Colles's law if valid established only the immunity of the mother, and did not justify the inference of latency. That a person was immune against syphilis no more proved that syphilis was latent in him than would a similar immunity against typhoid fever or tetanus. The term immunity had been used in two senses—as "refractory" and as "free from symptoms"; the latter was latency. He failed to grasp the distinction between "real" and "apparent" latency which the President had drawn. The term "latency" he took to mean a symptomless interval between two manifestations of disease, the second manifestation being either a clinical one or a discovery at the post-mortem table. Diseases which were non-specific, and which occurred in people who had had syphilis, were commonly called syphilitic, and this extended artificially the period of latency. Very little had been said as to the part which irritation, traumatism, or puberty played as disturbers of latency, and he quoted a case in which interstitial keratitis was evoked by traumatism. Paralysis of the limbs in late hereditary syphilis had frequently a blow for an exciting cause. In late hereditary syphilis two, five, ten, or twenty years might elapse before external manifestations were recognised, though internally the malady had existed in foci from the time of birth.

Dr. J. EDWARD SQUIRE said that the disease tuberculosis might lie latent for long, but the question was whether the germs remained latent also. Perhaps the bacilli were really active within an encapsuled focus, and doing as much damage as they could do in the confined space.

Dr. W. K. SIBLEY thought that the latency of a germ resembled the hibernation of an animal, and he referred to his published experiments upon the induction of tuberculosis in snakes, the disease progressing rapidly when the snakes were incubated, and becoming arrested when the reptiles were kept at an ordinary temperature. He suggested that experiments might be made with such an animal as the dormouse to see if tuberculosis would remain latent during the hibernation of the animal.

Dr. J. A. HAYWARD referred to a case which he had already published. A child was suffering from diphtheria and recovering, he was then attacked with measles, and at the invasion of measles there was a renewed activity of the diphtheria bacillus with a re-formation of membrane.

Mr. HUTCHINSON, in reply, explained that by "real" latency was meant absolute quiescence of the infective agent, whereas if the germ were doing something in the body he regarded this as "apparent" latency.

Dr. WASHBOURN and Dr. KINGSTON FOWLER also briefly replied.

PATHOLOGICAL SOCIETY OF LONDON.

The Varieties of Diphtheria Bacilli.—The Xerosis Bacillus.—Exhibition of Specimens.

AN ordinary meeting of this society was held on Dec. 17th, Mr. ALBAN DORAN, Vice-President, being in the chair.

Mr. E. A. PETERS read a paper on the Varieties of Diphtheria Bacilli, in which he described four kinds of bacilli. The following is a summary of points of difference seen in early cultivations. 1. Long Klebs-Löffler bacillus. A twenty-four-hour cultivation on blood serum showed short bacilli, long segmented forms 0·003 mm. in length, long clubbed bacilli, and short clubs. This bacillus was pathogenic to guinea-pigs, and did not readily lose this property. 2. Short diphtheria bacillus (described in detail for the first time). This bacillus when compared under the same conditions

with the long Klebs-Löffler bacillus differed from it in that at twenty-four hours' culture it consisted of a large number of conical bacilli 0·0015 mm. in length, with a few slightly segmented forms, which were characterised, as were also the short forms, by a pointed sheath. This bacillus was pathogenic to guinea-pigs, but soon lost this character. 3. The short pseudo-diphtheria bacillus under the same conditions showed numerous forms 0·001 mm. in length. Segmented forms were short and rare with this bacillus. The bacillus was never pathogenic to guinea-pigs. 4. Bacilli resembling the long Klebs-Löffler bacillus, except for slight clubbing and more definite segmentation. These were non-pathogenic to guinea-pigs. The clinical aspects of the cases in which these bacilli were found were: 1. The long Klebs-Löffler bacillus was found in cases of severe diphtheria. 2. The short diphtheria bacillus, which was less common, was associated with mild cases of diphtheria. 3. The short pseudo-diphtheria bacillus was widespread and was found in many cases of follicular tonsillitis, in cases of scarlet fever, rötheln, simple angina, and other catarrhal conditions. The affection with this bacillus *per se* was never fatal. Accordingly the importance of the differentiation of these bacilli, which was possible with cultivations on blood serum after twenty-four hours' exposure to a temperature of 37° C., was urged. 4. These bacilli caused no apparent hurt and were possibly non-pathogenic forms of the long Klebs-Löffler bacillus. Experiments principally by cultivation methods had been made by Mr. Peters for over a year with a view to the possible change of one variety into another, with the result that no such change was recognised. No. 2, however, readily lost its virulence to guinea-pigs. (Dr. Washbourn carried out the inoculation experiments.) It seemed probable that these bacilli were allied forms, while their morphological characters and clinical significance warranted the separation of these four varieties. The paper was illustrated by lantern slides prepared by Mr. Bousfield and also by cultures and microscopical specimens.

Mr. J. EYRE read a paper on Neisser's Xerosis Bacillus, commenting upon its close resemblance to the bacillus diphtheriæ. He had isolated it from the conjunctival secretion of a series of cases which presented slightly different appearances from the ordinary form of follicular conjunctivitis, and which appeared to be somewhat infectious; also from one case of trachoma, but he had been unable to detect it in the secretion from normal conjunctivæ. The cultural and morphological appearances upon various media were described and the differences between it and the Klebs-Löffler bacillus pointed out. The chief points to be relied upon in differentiating the xerosis bacillus from the bacillus diphtheriæ were summed up as follows: (1) first cultures from the conjunctival secretion, &c., did not make their appearance under thirty-six to forty-eight hours; (2) the production of an alkaline (never an acid) reaction in broth and milk; (3) retarded and scanty growth on gelatin—poor growth and rapid death upon potato; (4) the invariably innocuous character of the broth cultures when inoculated into animals susceptible to the bacillus diphtheriæ; and (5) the transition to a short, straight bacillus staining evenly after cultivation on blood serum for ten to fifteen generations, and the restoration of those characters which render it liable to be mistaken for the diphtheria bacillus when transplanted on to glycerine blood serum.

Mr. LENNOX BROWNE said that the photographs shown by Mr. Eyre disturbed his faith in the specificity of the diphtheria bacillus, for the organisms he had shown would certainly have been diagnosed microscopically as diphtheria bacilli. The diagrams which Mr. Peters had shown bore no resemblance to the photographs. He thought it important that bacteriologists should agree on a culture medium upon which the bacilli to be diagnosed should be grown, as very different results were obtained by growing the same organism on different media, and this tended to introduce confusion. He had seen an exceptionally mild case of diphtheria associated with the long bacillus, and an exceptionally severe case associated with the short bacillus, and he had found the pseudo-bacillus associated with ordinary tonsillitis. He had found streptococci, staphylococci, and diplococci (but not pseudo-bacilli) associated with cases which had taken the clinical course of diphtheria. In the last photograph Mr. Peters had shown he saw several staphylococci associated with the diphtheria bacillus.

Dr. WASHBOURN traced the history of diphtheria bacilli. What Löffler first described was a long bacillus which was pathogenic. Then Hoffmann described a short bacillus which he called the pseudo-diphtheria bacillus, which was non-pathogenic and was found under a number of conditions other than diphtheria. Roux and Yersin later contributed a paper[1] dealing with the biology of diphtheria bacilli and their relation to the pseudo-diphtheria bacillus. They found that the non-virulent forms were morphologically identical with the virulent forms. Mr. Peters had demonstrated a bacillus which differed morphologically from the diphtheria bacillus and which was found in diphtheria and other conditions. It always retained its cultural and morphological characters for those particular media respectively on which it was grown. It had been found in the throat in German measles, also in scarlet fever with a mild throat affection which was non-diphtheritic, and in another case of scarlet fever associated with nasal discharge, also not diphtheritic. Mr. Peters had described two varieties of diphtheria bacillus; a long bacillus which was either pathogenic or non-pathogenic and a short bacillus which differed in morphological particulars from the long bacillus which was pathogenic, but the virulence of which disappeared after long culture. Roux and Yersin had described both the long and the short bacilli as non-pathogenic. Those acquainted with the bacteriology of the microbe they were working with were quite familiar with the appearance of the organism on each of the respective media. The short bacillus grown in broth would become shorter, and the pseudo-diphtheria bacillus when grown on blood-serum would become longer; this showed how important it was to know exactly the nature of the culture medium from which the specimen had been obtained. He was satisfied that all Mr. Peters's preparations were from pure cultures and that there was no contamination of them with staphylococci.

Dr. KANTHACK thought that the confusion already existing had been rendered worse by Mr. Peters and Dr. Washbourn. Two forms of bacillus had been described as pseudo-diphtheria bacillus, one of which was morphologically like the true diphtheria bacillus, while the other was quite different. He thought that the term pseudo-diphtheria bacillus ought to be given up altogether. There was at present only one test which could be applied to decide whether a particular organism was pathogenic or not, and that was to discover its virulence when inoculated into animals. In cases which were not those of diphtheria bacilli had been found by him, and these when inoculated into a guinea-pig killed it in twelve or even ten hours. At St. Bartholomew's Hospital he had made 195 examinations, mostly on very virulent cases, and he found that he could not argue from the length of the bacilli or from their clubbing whether they were virulent or not. It was easy by cultivation to change the long form into the short form, and both long and short bacilli were to be found in nearly all colonies on the surface of agar; he had never found unmixed colonies of the long variety. He had occasionally seen the short variety change into the long variety. He concluded by asserting that any morbid lesion in a throat which was associated with the Klebs-Löffler bacillus was a case of diphtheria; that culturally, tinctorially, and morphologically these might resemble other non-pathogenic bacteria, and that they could not be identified without experiments on animals. With regard to the xerosis bacillus he had made examinations of a series of cases of conjunctivitis. From two cases, which were those of ordinary muco-purulent ophthalmia, he cultivated a bacillus on serum and agar-agar, which was morphologically identical with the diphtheria bacillus. In two cases of membrane upon the conjunctiva following traumatism, one from a burn with lime and one from a burn with nitrate of silver, similar bacilli were present. But the gelatin culture of this organism was different from that of the diphtheria bacillus; it grew in small colonies which were not dead-white like those of the diphtheria bacillus; the agar culture was also different. Non-pathogenic long bacilli resembling the long form of diphtheria bacillus had been found in bad meat and in cow's milk by Klein. There were, indeed, a large number of bacilli which conformed to this type, and this emphasised the small reliance to be placed on morphological identity.

Dr. H. DURHAM disputed the value of experiments on animals to determine the virulence of the organism under examination, and quoted Koch's experiments in this direction with cholera bacilli, which were absolutely worthless in identifying the microbe of cholera. What was required was to prove absolutely, by means as yet unknown, that the

[1] Annales de l'Institut Pasteur.

so-called pseudo-diphtheria bacillus could be raised in virulence.

Dr. GOODALL asked how many times the cases were examined before the organism was pronounced to be a pseudo-bacillus. Some of his patients had been examined twice and the bacillus of diphtheria had not been found, and yet the patients had afterwards developed paralysis. The long variety he had found to be always present in the severe cases, while the short variety he had not found by itself in cases which were really bad or in which paralysis had afterwards developed. He hoped the term pseudo-diphtheria bacillus would be discarded.

Mr. PETERS, in reply, pointed out that a bacteriological examination was often valueless unless material were taken directly from the larynx. His pseudo-diphtheria bacillus he had seen cause membrane in but one instance. The pointed bacillus, which was rare, was the one which, being pathogenic, most resembled the short, non-pathogenic bacillus.

Mr. EYRE also briefly replied.

The following card specimens were shown:—

Dr. WEBER: Heart from case of Angina Pectoris.

Dr. SNOW: Colloid Carcinoma of Breast.

Mr. LENNOX BROWNE: Malignant Growths of Tonsil.

Dr. ROLLESTON: Crateriform Ulcer.

Dr. HUGH WALSHAM: Tuberculous Liver with Lardaceous Disease.

CLINICAL SOCIETY OF LONDON.

Membranous Colitis treated by Right Colotomy and subsequent Closure of the Wound.—Congenital Median Cervical Fistula.

AN ordinary meeting of this society was held on Dec. 13th, Dr. WHIPHAM, Vice-President, being in the chair.

Dr. HALE WHITE and Mr. GOLDING-BIRD communicated the particulars of a case of Membranous Colitis treated by Right Colotomy and subsequent Closure of the Wound. The patient, a neurotic woman aged thirty, first began to pass mucus from the rectum and to suffer from constipation in 1885. From that time both these symptoms had become more marked, and by 1891 she was suffering from severe abdominal pain. In the next year the motions often consisted of nothing but mucus and blood, and the pain was agonising. This state of things continued till 1894, when she began to pass tubular casts; the pain kept her in bed most of the day, very strong purgatives were necessary to move the bowels, and she was a complete invalid. When seen by Dr. Hale White and Mr. Golding-Bird in 1895 she was in the same condition and had much tenderness over the descending colon and sigmoid flexure. A motion was examined; it consisted of a little fæces, much mucus, long tubular casts, and a considerable amount of blood. As during the previous ten years all sorts of drugs, various diets, prolonged rest in bed, and many health resorts had been tried, it was decided, with the consent of Dr. Walter Smith of Dublin, to perform a right colotomy. The bowel was fixed to the surface on May 10th, and opened on May 17th. Three days later the colon was washed out from the artificial to the natural anus with hot water, but already the membranes had ceased to be formed. For five weeks all the motions were passed through the artificial anus without the aid of purgatives. The fæces always appeared normal. As at the end of this time all the original symptoms had disappeared, the colotomy wound was closed and the bowels were subsequently kept confined for a week with opium. Some compound liquorice powder was then given, and a motion which was passed contained neither mucus nor blood. The general health and strength improved, and she went into the country on July 24th, feeling better than she had done for many years, having passed no blood or mucus since the operation on May 10th. Dr. Hale White and Mr. Golding-Bird submitted that in a severe case of membranous colitis this treatment was justifiable and was the most rational, for by it the colon could have complete rest. Their patient, it was true, had since died, but as far as could be made out her death had nothing to do with her operation or the colitis. Her subsequent history was imperfect, but it could not be made out that she suffered from membranous colitis after she left London.—Mr. ADNEY (Tunbridge Wells) said that he witnessed the last forty hours of the life of this patient. When called to her he found that she had already acute general peritonitis which was equally marked on both sides of the abdomen. She was moribund, and the inflammation appeared to be of the suppurative form. The swelling felt per rectum was probably an enlarged lymphatic gland which had suppurated and the resulting abscess burst into the peritoneum. The patient stated that there had been no return of the symptoms pointing to colitis.—Mr. GODLEE said that the treatment of dysentery by colotomy had been suggested to him many years ago by Dr. Manson, but he had only had an opportunity of putting it in practice during the present year. The patient, a female, had suffered from dysentery in India, but the symptoms had passed off. Since her return home she had suffered from hepatic abscess which had burst into the bowel, and she had nearly lost her life from thrombosis after child-birth. The dysentery set in again and he did a left colotomy, his object being to apply nitrate of silver or other suitable local applications to the diseased bowel. The whole mucous membrane in the neighbourhood of the colotomy opening was studded with long polypoid growths an inch and a half or two inches in length. The patient somewhat improved after operation, but she died later from causes apart from the dysentery.—Dr. TURNEY said that between three and four years ago Mr. Ballance operated on a case which he had diagnosed as dysentery, but which turned out not to be so. The patient was a man aged thirty-five who had been in India but had not suffered from dysentery there. He complained of a discharge of blood and mucus from the bowel, and he was much emaciated. Mr. Ballance opened the abdomen in the right inguinal region, cut across the ileum near the ileo-cæcal valve, bringing the upper end of the gut to the surface and fixing it there to form an artificial anus, the lower end being also brought out for irrigation purposes. The gut was irrigated several times daily, the fluid traversing the whole length of the colon and escaping at the anus. The patient improved at first, but died from hypostatic pneumonia within a week. The ulcerated bowel readily absorbed the toxic products passing along it, although the mucous membrane was too diseased to perform any physiological function; hence it was no loss to the patient to be deprived of the use of the large intestine. He hoped this method of treatment would be extended to cases of ulcerative colitis. In the light of the case which had been narrated he was disposed to believe that in another case division of the intestine would be unnecessary.—Dr. F. HAWKINS (Reading) said that as membranous casts frequently came from parts of the bowel other than the colon he objected to the term "membranous colitis." He had seen cases in which casts had come from the jejunum and ileum. He thought a better name would be "mucous disease of the bowel." He believed that this affection was more common than was supposed, for he himself had met with several examples. In one case the patient, a woman aged forty-four, ceased to pass casts under purely medical treatment, and she had not passed any now for three years. She had been in the habit of taking large doses of sulphate of magnesia daily for a year before the trouble commenced, and another case had been reported in which the disease was preceded by the taking of large doses of this salt.—Mr. BARKER asked what was the microscopical structure of the casts and what was the mode of their production. In one case in which he made a microscopical examination of the casts they appeared quite structureless, containing only some scattered epithelial cells, the remainder of the casts appearing to consist merely of coagulated mucus.—Dr. HERRINGHAM said he was interested in the causation of this affection, among other reasons, because he himself had been a sufferer from it. The passage of casts usually followed a long period of constipation. He had examined many such casts under the microscope, and they were always structureless. If under treatment the constipation disappeared the membranes ceased to be formed. He knew of three cases which came to a sudden fatal termination, in all of which death was preceded by great pain and tenderness in the left side of the abdomen. In one of these cases which died after operation, and in another case which recovered after operation, an abscess was found in the region of the descending colon. With regard to the causation of these abscesses in the region of the sigmoid flexure, he thought they were due to retained fæces leading to ulceration. In one of the two cases of abscess he had referred to a small communication with the bowel was found, but in the other the pus was perfectly sweet, and as far as could be made out no communication existed with the gut. He added that a German physician who had described these cases under the name of "pericolitis

sinistra" believed them to be as common as suppurative lesions of the vermiform appendix.—Dr. SIDNEY PHILLIPS said that the subject under discussion was the treatment of colitis, and not that of dysentery; moreover, the mucous casts which were passed in cases of colitis were very different from those which were consequent on prolonged constipation. In colitis sloughs of mucous membrane were frequently passed, and the symptoms were different from those met with in association with dysentery. In colitis the ulceration often involved the small intestine as well, and this was a reason why, perhaps, the intestine should be opened in the lower ileum in preference to the colon.—Dr. WHIPHAM said that he had seen a case in consultation with Mr. Edgcombe Venning which was on all fours with the one related by Mr. Golding-Bird. The patient was a neurotic young woman who had passed mucous casts for some months before he saw her, and the passage of the casts was always preceded by attacks of severe pain in the region of the descending colon. Small doses of calomel secured free evacuation of the bowels, and the motions contained shreds and casts of mucous membrane. She was kept altogether in bed on a milk diet, and under this *régime* she became extremely emaciated, and it was feared that she would succumb, but although no change was made in the treatment she suddenly took a turn for the better, and for six months she had been quite well. A point of interest in connexion with this case was the fact that her sister had since manifested symptoms of the same affection.—Dr. HALE WHITE, in reply, said that he dissented altogether from what Dr. Hawkins had said in respect of the nomenclature, for the term "mucous disease" of the bowel was already applied to a different affection in children. He admitted that the disease might not be as rare as had been supposed, but it was certainly rare in a severe form. The mild form commonly followed constipation, and the patients usually got well when the constipation was relieved. This form was commoner in hysterical women. The severe form did not appear to be commoner in women than in men, nor was it commoner in neurotic subjects. With regard to the cases of abscesses in the left side of the abdomen, he had recently seen a case in which an elongated vermiform appendix led to an abscess which opened on the left side. With regard to the action of sulphate of magnesia as a causative agent, the patient did not go to Kissingen to take the waters until many years after the disease had been established. The microscopical appearances of these casts had been accurately and exhaustively described by Dr. Wilks and Dr. Goodhart in the Transactions of the Pathological Society.—Mr. GOLDING-BIRD, in reply, said that the local tenderness over the ascending colon led him to select that part of the gut for opening. It was remarkable that Mr. Godlee's patient was relieved by the operation although he did nothing to the papilliform excrescences on the mucous membrane. It should be borne in mind in respect of these cases that the mechanism of defecation when set in action in association with an ulcerated bowel excited profound nervous depression, and the opening of the gut in the region of the descending colon, by obviating this in a great measure, probably explained the relief experienced by Mr. Godlee's patient.

Mr. R. BARWELL related a case of Congenital Median Cervical Fistula in which operation was followed by recovery. The patient, a young woman, was sent to him in April last by Dr. Bezly Thorne with well-marked lateral curvature of the spine. On June 11th, her back being nearly straight, she showed an opening in the mid-line of the neck, situated on the most prominent point of the thyroid cartilage, which occasionally, at least once a day, discharged a thin fluid, and of which she was very anxious to be cured. The small orifice was surrounded by depressed and reddened skin for about a quarter of an inch from side to side; nearly half an inch from above downwards it was partially overhung by a transverse narrow fold of healthy skin. While the deeper parts of the throat were at rest the coloured depression was very shallow, but in swallowing it deepened, being drawn upward and inward, gliding under the transverse fold, which thus became more overhanging, widening also so as to stretch almost from one sterno-mastoid to the other. On palpation a line of cylindrical, somewhat hard tissue could be felt running up from the opening to the hyoid bone; it seemed about the size of a cedar pencil. The foramen cæcum was not abnormally large. She would not allow the use of a probe. He diagnosed a tubular remnant of a supra-hyoid accessory thyroid gland, and on June 19th he dissected it out through a small oval incision. The wound healed rapidly, though a re-collection of fluid had to be evacuated about a fortnight later. Unfortunately, no microscopical examination was made of the tube removed.

OPHTHALMOLOGICAL SOCIETY.

Retinitis Circinata.—A rare Form of Nystagmus.—Superficial Peripheral Choroiditis.—Embolism of the Central Retinal Artery.—Retro-bulbar Optic Neuritis.—Recurrent Paralysis of the Third Nerve with Migraine.—Double Ptosis.—Paralysis of both Internal Recti.—Exhibition of Cases and Card Specimens.

AN ordinary meeting of the above society was held on Dec. 12th, Mr. EDWARD NETTLESHIP being in the chair.

Mr. HARTRIDGE showed a case of Retinitis Circinata. It presented the appearance of a grey degeneration at the yellow spot, with a mass of white deposit in the nerve fibre layer of the retina radiating from the yellow spot region. There were no retinal hæmorrhages. It did not agree in every detail with the recognised appearances, but he thought it was possibly an early stage of retinitis circinata.—Mr. HOLMES SPICER thought that the characters of the white exudation in this case were more like those of albuminuric retinitis than of retinitis circinata. In all the undoubted cases that had been observed there had been a remarkable constancy in the character of the exudation, a grouping quite different from that shown in this case.—Mr. HARTRIDGE, in reply to Dr. HABERSHON, said that there was no renal disease; the heart had not been examined.

Dr. ERNEST CLARKE showed one case and Dr. GRIMSDALE three cases of Nystagmus in the fixing eye during occlusion of its fellow. In Dr. Clarke's case the vision in the two eyes together was $\frac{6}{9}$; when either eye was occluded by placing a card in front of it, the uncovered eye immediately began to oscillate violently. In Dr. Grimsdale's cases the nystagmus was of the same kind, but less marked.—Dr. HABERSHON said he had examined Dr. Clarke's case and found that, though there was no sign of actual nerve disease, the patient was of a neurotic type, and all the reflexes were more pronounced than usual.—Dr. ORMEROD pointed out that the patient was a jeweller and that the nystagmus had come on since he commenced that trade, in which he used a single watchmaker's glass to one eye.

A case of Peripheral Choroiditis of Obscure Origin was shown by Dr. RAYNER BATTEN. The patient was a woman aged forty. The choroiditis was limited to the periphery; the outline of the patches was irregular and map-like; the deeper layers were not affected, but the surface layers had a bleached appearance. Vision was almost unaffected except for slight contraction of the fields. No evidence of acquired syphilis could be found; the condition was probably a late manifestation of inherited syphilis. It was still progressing.—Mr. HOLMES SPICER thought the fundus changes in Dr. Batten's case were due to congenital syphilis, the white lines seen along the smaller veins being a common feature of that affection, and were also an indication of recent progress.

Mr. MARCUS GUNN related the case of a young adult anæmic girl in whom Embolism of the Central Retinal Artery occurred without evidence of cardiac disease. About three weeks ago there was sudden failure of the left eye, with the appearance of a thick film before it. The vision had somewhat recovered in part of the field since. She was suffering from amenorrhœa at the time. Although there was not much change in the size of the arteries there was the typical cherry-red spot at the macula. Although at first he regarded it as a case of embolism, he had since thought that it might have been a hæmorrhage into the optic nerve sheath which had affected the vascular supply of the nerve.—Mr. HARTRIDGE spoke of a recent case of embolism of the central artery in a healthy man. When the patient was seen two hours and a half after the occurrence there was already œdema of the retina.—Mr. BICKERTON mentioned a case he had seen lately in which there was very little apparent change in the vessels, and the pupil acted to light.—Dr. BATTEN cited a case of sudden failure of sight in an anæmic girl, with very slight changes in the vessels.—Mr. DRAKE-BROCKMAN said that some time ago he had seen a woman who, with a sudden attack of giddiness, had completely lost the sight of one eye. The patient was anæmic, but was free from cardiac disease or albuminuria.

Mr. HOLMES SPICER showed a case of Retro-bulbar Optic Neuritis occurring in a healthy man sixty-eight years old

whose sight had been failing for seven months. He had been a great smoker, but had given up smoking. There was no history of rheumatism, gout, or syphilis, no locomotor ataxy or disseminated sclerosis, and no renal disease or diabetes. The optic discs were very pale and slightly swollen. The fields were quite full, but he had a large colour scotoma at the fixation point. The case presented all the features of a severe tobacco amblyopia, but recovery had not followed abstention from the poison; he had got steadily worse.—Mr. GRIFFITH thought that the pallor of the discs in the case exhibited was too intense for uncomplicated tobacco amblyopia.—Mr. JOHNSON TAYLOR considered the case was an aggravated one of tobacco neuritis complicated with alcoholism.—Dr. HABERSHON suggested that the case occupied an intermediate place between tobacco amblyopia and the family cases of optic atrophy described by Leber.—The PRESIDENT said that cases were sometimes met with in which tobacco produced much graver changes in the nerve than were usually met with, and these were generally those of old men. The present case he considered might be of that class.

Dr. ORMEROD and Mr. HOLMES SPICER showed a case of Recurrent Paralysis of the Third Nerve with Migraine. A boy aged fifteen had had complete paralysis of the left third nerve when a year old; recovery took place. When he was about seven years old he had a second attack; since then he had had an attack every nine or ten months. He was subject to "bilious" attacks, with intense headache on the left side, and the paralysis always came on during a bad attack. There was some atrophy of the left optic nerve, and some of the paralysed muscles had never recovered. The present attack was passing off, but there were still slight ptosis, a dilated pupil, and complete paralysis of the external muscles of the eye supplied by the third nerve.

Mr. WAREN TAY showed a case of Recent Double Ptosis with Loss of Convergence and Weakness of the Internal Recti. There was no apparent cause for the attack; at first the movements of the eye were good, but complaint was made of diplopia; later the failure of convergence was marked. Recovery quickly followed the use of iron and nux vomica.

Mr. TREACHER COLLINS showed a case of Paralysis of both Internal Recti. A man aged twenty-two had suddenly had paralysis of both internal recti five days ago, accompanied by headache. He was unable to move either eye towards the nose either in looking to one side or in convergence. The pupils acted normally and vision was good; his gait was unsteady, his knee-jerks were exaggerated, and he became unsteady on standing with his eyes closed.—Dr. TURNER made some remarks on the probable seat of the lesion in the last two cases.

The following case and card specimens were shown:

Mr. DONALD GUNN: Peripapillary Atrophy of the Choroid of Unusual Character.

Mr. SPENCER WATSON: Specimen of an Eye lost after Removal of a Foreign Body by the Electro-magnet.

Mr. JESSOP: Specimen of Papilloma of the Conjunctiva.

HUNTERIAN SOCIETY.

Exhibition of Specimens.

AN ordinary (pathological) meeting of this society was held on Dec. 11th, the President, Mr. C. J. SYMONDS, being in the chair.

Dr. F. J. SMITH showed two specimens of Tubercle of the Choroid taken from a case of tuberculous meningitis.

Mr. COTMAN showed a specimen of Perforating Ulcer of the Stomach taken from a man forty-eight years of age.—The PRESIDENT spoke on some points in the diagnosis of the occurrence of perforation, and quoted some cases of correct and incorrect diagnosis within his own experience.—Dr. F. J. SMITH also spoke of the difficulties of diagnosis and advised operation (even exploratory) when perforation was diagnosed.—Mr. OPENSHAW said there was no difficulty in posterior perforations.—Mr. COTMAN replied.

Dr. J. H. SEQUEIRA showed a specimen of Rheumatoid Arthritis taken from a dissecting-room subject. The left shoulder-joint was affected, and there was atrophy of the biceps muscle.—Mr. CAMPBELL MCDONNELL discussed the relationship of rheumatism and rheumatoid arthritis, as did also Dr. GLOVER LYON, and Dr. SEQUEIRA replied.

Mr. OPENSHAW showed: (1) a Solid and Sarcomatous Growth of the Ovary weighing 7 lb. 7 oz.; (2) a Sarcoma of the Kidney removed by operation from a man twenty-four years of age, which had only been growing five months and weighed several pounds; and (3) a Myeloid Sarcoma of the Middle of the Shaft of the Femur, for which he had performed amputation at the hip-joint by a method of his own.—In connexion with Mr. Openshaw's second case, the PRESIDENT mentioned a large abdominal tumour which had existed for more than six years without apparent increase or much serious discomfort to the patient; he thought it was an adenoma of the suprarenal capsule, but had not been able to obtain a necropsy when the patient died from an intercurrent disease.

SOUTH-WEST LONDON MEDICAL SOCIETY.

Hydro-nephrosis.—Lightning Stroke.—Septic Pneumonia.—The Treatment of Incised Wounds.—Exhibition of Cases.

A CLINICAL meeting of this society was held on Dec. 11th, Dr. GILBERT RICHARDSON in the chair.

Mr. THOS. S. HOWELL read notes of an interesting case of Hydro-nephrosis in which the obstruction in the ureter was believed to have originated in a strain at the age of thirteen years; the patient died suddenly from hæmorrhage into the sac at the age of forty-four years.

Mr. PERCY POPE read notes of the following cases: (1) Five Cases of Lightning Stroke occurring Simultaneously; and (2) a Large Quantity of Morphia taken Subcutaneously with Suicidal Intent.

Mr. M. G. BIGGS read notes of a case of Septic Pneumonia.

Mr. A. E. DODSON made some remarks on the Treatment of Incised Wounds, advocating the avoidance of the use of water in surgical incisions.

Mr. JOHN GAY showed a patient who had received a Gunshot Wound above the Right Elbow, causing extensive Laceration of the Tissues and Severance of the Musculospiral Nerve. The healing of the wound was followed by complete loss of power in the forearm, which was entirely restored by a ten months' course of massage.

Dr. A. D. ROE showed a case of Mitral Disease in a boy.

Dr. M. MACKINTOSH showed a case of Empyema in a boy which had been entirely cured by one aspiration.

ÆSCULAPIAN SOCIETY OF LONDON.

Exhibition of Case and Specimen.—Diphtheria successfully treated with Antitoxin.—Intestinal Obstruction.

A MEETING of this society was held on Dec. 6th, Dr. E. F. WILLOUGHBY, President, being in the chair.

Mr. W. C. WORLEY showed a case of Extensive Molluscum Fibrosum in a man of poor mental and bodily development aged fifty-two. The growths, which varied from the size of a pea to that of a small grape, had appeared gradually during the past six years, were numerous, and were distributed over the body above the knee, but especially on the face and neck.

Mr. W. C. M'DONNELL read notes of a case of Diphtheria successfully treated with Antitoxin. The usual clinical signs of diphtheria were present, breathing became stertorous on the third day of treatment, and the urine, examined on the fourth day, contained a trace of albumin. Antitoxin was injected (15 c.c.) on the third day, and again (10 c.c.) on the fourth. Within two days of its use all the symptoms had greatly improved, and recovery was uninterrupted. Löffler's bacillus was not isolated in a specimen of mucus first examined, but it was found in a second.

Mr. A. QUARRY SILCOCK read notes of two cases of Intestinal Obstruction. In Case 1 the patient was seen in consultation with Mr. Beaman Hicks. The obstruction was evidently low down in the large intestine. An exploratory median incision showed the colon to be much distended. It was, therefore, punctured and the puncture closed with Lembert's sutures. A malignant tumour could then be felt in the sigmoid flexure. The colon was stitched to the abdominal wound and opened thirty-six hours later. Recovery was rapid. The patient in Case 2 was seen in consultation with Mr. Hoskins. The same symptoms were present and the same operative procedure was adopted as in Case 1. The colon could not, however, be brought up to the mesial incision, and a left inguinal colotomy was therefore performed. Recovery was rapid, but the patient died some

months later. Mr. Silcock emphasised the utility of the exploratory method pursued in these cases as being efficient and as obviating injury by bruising, &c., to the distended structures.

Mr. G. STEVENS showed a specimen of Rupture of the Heart. The patient, a man aged seventy-six, became collapsed after the passage of a stool and died within three-quarters of an hour. It was found that the left ventricle was ruptured by a small aperture posteriorly, near the interventricular septum. The loss of blood had evidently been gradual. The heart tissue was fatty, and showed also the microscopic signs of pigmentary infiltration.

SOCIETY OF MEDICAL OFFICERS OF HEALTH.

(METROPOLITAN BRANCH.)

Outbreak of Enteric Fever.

A MEETING of this society was held on Dec. 10th, Dr. YARROW being in the chair.

Dr. SIDNEY DAVIES read a report on an Outbreak of Enteric Fever distinctly traceable to a particular milk-supply, though the actual cause could not be discovered. Plumstead had been comparatively free from the disease, the number of cases notified in the past three years having been 22, 29, and 26, and up to the beginning of May of the present year there had been 6 scattered cases as regards time and place. Between the 9th and 11th of that month 6 cases, all getting their milk from this dairy, had been reported, but he did not apply for a closing order until the number had risen to 25 by the 15th. The milk was nevertheless sold surreptitiously, and on the 29th there had been 92 cases. In the following weeks 47, 21, 7, and 6 and between June 26th and 30th 4 fresh cases were reported, besides 13 in July. Of the 177 cases occurring in the district up to the nd of June 159, or about 90 per cent., were proved to have had their milk directly or indirectly from this dairy—33 of them from a shop in Woolwich which was supplied from the Plumstead dairy. How many cases may have occurred in Woolwich from the same milk could not be ascertained, and the epidemic must have continued to rage there had the dairyman been content to obey the letter of Section 71 of the Public Health (London) Act, selling his milk exclusively in Woolwich, but the notoriety he obtained by defying and evading the magistrate's order, for which he was again summoned and fined, led to the breaking up of his establishment and the sale of his stock on May 28th. The occurrence within a few weeks, at a time of year at which enteric fever does not usually prevail, of six or seven times as many cases as had previously been known to arise in a whole year, pointed to some extraordinary cause; and the fact that 90 per cent. of these were proved to have had milk from a single dairy left no room for doubt as to its influence, which was confirmed by the decline of the epidemic following the cessation of the sale of milk after the interval required for incubation; but had the business not been conducted so irregularly as it was, without books, &c., an even larger percentage of the cases might have been traced to the same source. In 44 of 141 houses regularly supplied by the dairyman's carts there were 65 cases. Of 49 houses in certain streets supplied by him 29 were invaded, but only 2 of the remaining 150. The 177 cases included 74 males and 103 females; 23 were under five years of age, 41 from five to ten, 57 from ten to twenty, 45 from twenty to forty, and 6 over forty, one of these, a mild case, being seventy-one years of age. Besides these there were several suspicious cases of diarrhœa among infants. The cases sent to hospital numbered 113, with 13 deaths, and those treated at home 64, with 10 deaths, or 11 and 15 per cent., in marked contrast to the usual mortality of scarlet fever &c., and probably due to the more careful dieting of patients in hospitals. The case mortality in Plumstead had previously been 22 per cent.; possibly the lower rate on the present occasion might have been owing to the larger proportion of children attacked in a milk epidemic. An inspection of the dairy showed the drains to be everywhere unsound, the yard gulleys defective, the rain water pipes connected with the drains, and the cowsheds extremely dirty. The water-supply was that of the Kent Company, and as drawn from the taps was of its well-known purity, but there was a brick tank, lined with cement, from which the water was baled for the cows, and possibly for washing the cans. The tank was green and the water turbid, the former evidently not having been cleaned for months or years; and the milk was kept in a cellar under the house, where it was possibly exposed to sewer air. The cows were apparently in good health, and an examination of the milk and of the water in the tank failed to show the presence of the typhoid fever bacillus, though the bacteria in each were identical. Little value, however, could be attached to such purely negative results in the face of the overwhelming evidence of the connexion of the epidemic with the supply of milk.

LIVERPOOL MEDICAL INSTITUTION.

Endo-laryngeal Removal of "Singer's" Nodule.—A Responsibility to the Lying-in Patient from a Sanitary Point of View.—Spinal Localisation.

A MEETING of this society was held on Dec. 12th, the President, Mr. CHAUNCY PUZEY, being in the chair.

Mr. BARK showed two patients after Endo-laryngeal Removal of "Singer's" Nodule. They were both professional voice users. The first patient had completely lost his singing voice; the growth had been removed in 1892 by another surgeon, but recurred in about a year. In July, 1893, the growth was completely removed by Grant's guarded laryngeal forceps. Two weeks later he fulfilled a professional engagement and said that his voice had never been better; there had been no recurrence since. The second patient had suffered from hoarseness and loss of singing voice for over two years; the growth in this case also was removed by Grant's forceps; this was in June, 1894, and the voice had been good ever since.—Mr. BARK also showed a Papilloma removed from the Anterior Commissure of the Larynx by Gibb's snare and a patient suffering from Trachoma of the Larynx.

Dr. STEEVES read a note entitled "A Responsibility to the Lying-in Patient from a Sanitary Point of View." He thought that a variety of puerperal fever existed the result of defective sanitation, and instanced cases where he believed puerperal septicæmia was caused by atmospheric infection by sewer air. He referred to the great benefit that a puerperal fever patient derived from removal to healthy surroundings. In the city of Liverpool one-third of the puerperal fever cases reported were from houses described as insanitary. The prevalence of this disease was no necessary index of the amount of zymotic disease existing. The medical attendant when engaged for a confinement rarely inquired into the sanitary condition of the house, but Dr. Steeves thought that if the physician was not experienced in sanitary details he should not hesitate to obtain a skilled opinion. If the owner of the property refused to abate a nuisance the aid of the sanitary authority should be invoked. A protracted period of ill-health frequently followed confinement, the victim really suffering from chronic sewer air poisoning; this could only be put an end to by change of residence or an alteration in the sanitary arrangements of the house. Dr. Steeves then moved the following resolution, which was seconded by Dr. Imlach: "That, in the opinion of the members of the Liverpool Medical Institution, it is the duty of every medical practitioner, when engaged to attend a confinement, to forthwith inspect, or cause to be inspected, the premises of the patient, with a view of having any sanitary defects which may exist corrected, and so further the stamping out of puerperal septicæmia by the methods of preventive medicine." Several members spoke on the resolution, some stating that, in their opinion, insanitary conditions had nothing whatever to do with puerperal septicæmia; others thought that the resolution to be effectual should apply to every kind of illness, and not specially to the puerperal woman. It seemed to be generally agreed that it would be very unwise that any such resolution should go forth to the public from the institution, and on being put to the vote it was rejected by an overwhelming majority.

Professor SHERRINGTON drew attention to the Localisation of Function in the Spinal Cord as illustrated by the distribution to the skin of the sensory spinal nerve pairs arising from the cord. He pointed out that experiments show the field of skin supplied by each sensory spinal nerve root to be a large area of somewhat simple configuration. Where simplest—that is, in the trunk and neck—the segmental skin field is band-like, wrapping transversely round one lateral

half of the body. In the limbs the spinal skin fields are distorted and are disconnected from attachment to the median line of the body, whereas in the trunk and neck each of the spinal skin fields extends from the mid-dorsal line to the mid-ventral line. In the region of the limbs the mid-dorsal line of the body may be said to extend laterally in a side branch, forming a secondary axis almost at right angles to the main axis; upon this secondary axis, which may be called the limb axis, the spinal skin fields are ranged as though upon folded portions of the axial lines of the trunk itself. Each spinal skin field spreads out to a marked extent into neighbouring spinal skin fields, and in this way has an overlap into the field in front and the field behind. There is, therefore, no area of skin which is supplied by one spinal nerve alone; the supply is from two roots in some places, as in the palm, and in others from three roots. Although in a plexus each sensory spinal root gives separate contributions to many nerve trunks, the cutaneous distribution of the root composes a field, not of discrete or disjoined patches, but of patches so joined that the distribution of the entire root forms one continuous field. Numerous slides were shown in the lantern of the various skin fields as met with in the monkey.

Professor PATERSON described the Distribution of Spinal Nerves to the Skin and Muscles of the Trunk and Limbs of Man. By means of a large parti-coloured model he showed how closely the skin fields in man correspond with those found experimentally by Professor Sherrington in the monkey. He pointed out that, while superficially segmental in origin, the spinal nerves are truly segmental in distribution only to the muscles of the thoracic wall—where the segmental elements forming muscles have combined, the segmental nerves combine also, forming plexuses. With regard to cutaneous innervation it was certain that overlapping takes place in the distribution of the simplest type of nerve, so that it was possible to affirm that no spot of skin and no muscle (except the inter-costal muscles) are supplied by a single spinal nerve. With this qualification the cutaneous innervation of the trunk between the limbs is zonular—continuous belts of skin are supplied from back to front by the branches of the third to the twelfth thoracic nerves. The growth of the head and limbs causes the adjacent nerves to be drawn out of their primitive position. In the limbs, lines (dorsal and ventral axial lines of Sherrington) could be drawn from the middle line of the body down the limbs and indicated the meeting-place of widely separated nerves; it is only at the ends of these lines that a continuity of distribution appears. It is seen in the limbs that, in spite of the apparent complexity due to the combination of the spinal nerves in the plexuses and in the nerves of distribution, a definite arrangement exists by which the skin and musoles are supplied by a gradually descending series of spinal nerves, proceeding from the pre-axial to the post-axial borders of the limbs.

MANCHESTER MEDICAL SOCIETY.

Chorditis Tuberosa.—Pathogenesis of Cancer.—Malignant Endocarditis.—Tuberculous Disease of the Mucous Membrane of the Middle Ear.

A MEETING of this society was held on Dec. 4th, the President, Mr. F. A. SOUTHAM, being in the chair.

Dr. YONGE showed a case of "Singer's" Nodes of the Vocal Cords in a boy aged fourteen, without history, and without symptoms except partial loss of the upper register in singing. The unusual features of the case were the absence of hoarseness or symptoms of laryngeal fatigue (which are met with in the majority of such cases), the peculiar position of the nodes, which were situated about the centre of the cords instead of anterior to that point, and the absence of any history of laryngeal overstrain. The cords, in spite of being "weighted," as it were, by the nodes, vibrated in a similar manner to healthy cords. This was proved by blowing indigo on to the cords, when the particles moved outwards in a curved line towards the ventricles during phonation, behaving in precisely the same manner in which, as Dr. Hodgkinson has shown, they do in the normal vibrating cord; the efficient vibration explained the absence of vocal impairment in the case.

Mr. ROGER WILLIAMS, in his remarks on the Pathogenesis of Cancer, said that for many years the microbic theory of cancer had been so much the order of the day that no other had been able to obtain a hearing. Inasmuch, however, as the cancer microbe had not yet been discovered, and as collateral indications of its existence were conspicuous only by their absence, he thought the time had now come for setting forth a rival theory, and that was the task to which he proposed to address himself. It was evident that out of the confusion of a transition period but two conceptions as to the origin of neoplasms had emerged, the one based on the cell theory and the other on the microbe theory, and henceforth the struggle must be between these two. The question now was, Did cancers and other neoplasms arise, as J. Müller maintained, through a modification of the formative process, or were they the outcome of the inflammatory process owing to the presence of microbes or other sources of irritation *ab extra*? In other words, Were neoplasms essentially of *intrinsic* or *extrinsic* origin? He inclined to the former alternative and thought that the future would see a decided reaction in this direction. Having entered at some length into the various considerations favourable to this view, the conclusion was reached that in the great majority of cases the outbreak of cancer was entirely spontaneous and could not be attributed to the immediate action of any appreciable extrinsic cause whatever. In the genesis of neoplasms, as in the genesis of other organic structures, two factors must be taken into consideration—the *cells* whence they originate and the *force* that regulates the cellular activities. Lowly organised cells abounded in all parts growing and capable of growth, and these were the only real cancer and tumour germs. The essence of the neoplastic process was that certain cells of the affected part grew and multiplied more rapidly than their congeners, regardless of the requirements of the adjacent tissues and of the organism as a whole. The essential feature of malignancy was the persistency of this undue proliferative activity. The process by which cancers and other neoplasms arose might be regarded as a kind of abnormal generation, the tumour being the result of this modified super-induced repetition of the developmental process, and its qualities the result of the degree of emancipation of its constituent cells. Hence the genesis of cancer and other neoplasms was a phenomenon of the same order as discontinuous growth in general.

Dr. DRESCHFELD gave a communication on the etiology of Malignant Endocarditis. Of the organisms found some did not occur in other affections; others were well-known microbes, such as the staphylococci, streptococci, and pneumonococci. In some rare cases the typhoid bacillus, the bacillus of tuberculosis, the bacillus of diphtheria, and the gonococcus had been found. Of the predisposing causes besides pyæmic and septicæmic diseases, the acute zymotic diseases, pneumonia, and chronic endocarditis, Dr. Dreschfeld mentioned chorea, which in one case, without any previous endocarditis, was associated with malignant endocarditis, and related a case where rupture of one of the aortic valves from overstrain was soon followed by malignant endocarditis. The season had also some influence on the occurrence of malignant endocarditis; several of the cases observed commenced during the months of September and October. Of the various clinical forms, one was specially referred to where the chief symptom, besides the physical signs of endocarditis, was an intermittent pyrexia, the temperature rising only a few degrees for several hours, and being soon succeeded by a normal temperature. The rise of temperature was ushered in by a sensation of cold or distinct chill and general malaise; during the afebrile period the patient feels comparatively well. These cases often go on for months. They usually terminate fatally; occasionally, however, they recover. The examination of the blood during life, withdrawn by means of a syringe from a vein, gave often negative results on microscopic examination and on cultivation; occasionally, however, an organism (usually a streptococcus with virulent properties) was obtained. Large doses of quinine and the administration of arsenic appeared to give the best results. Several cases with typical signs of malignant endocarditis (intermittent or remittent pyrexia, symptoms of embolism, &c.) recovered under this treatment.

Dr. MILLIGAN read a paper upon Tuberculous Disease of the Mucous Membrane of the Middle Ear. In the first place he pointed out the insidious onset of the affection. The occurrence of a discharge from the mucous membrane of the middle ear, unaccompanied by pain or any of the usual symptoms of an acute sthenic inflammation, and the presence of a perforation in the centre of a pale, œdematous, and uninflamed membrana tympani, should always excite suspicion. The presence of enlarged cervical glands and the early appearance of facial paralysis are also important symptoms.

Special reference was made to the occurrence of facial paralysis in these cases, and its comparative rarity in non-tuberculous middle-ear affections. In order to definitely establish the tuberculous nature of such cases scrapings of portions of diseased bone, removed from the interior of the mastoid process, were taken and inoculated subcutaneously into guinea-pigs. In the course of from two to five weeks the animals were killed, and scrapings from enlarged glands taken and examined for bacilli. Microscopic sections of the liver and spleen were also made and examined. Of ten cases thus experimentally examined eight proved to be tuberculous and two non-tuberculous. Great stress was laid upon ascertaining the essential character of the morbid affection, not only from the point of view of treatment, but also from that of prognosis. In tuberculous middle-ear affections the prognosis is grave, and the younger the patient the graver the prognosis, thus differing very materially from simple inflammatory non-tuberculous cases, where the prognosis is good. Free removal of all diseased foci of bone should be undertaken, and, in general, to effect this it will be found necessary to open the mastoid cells. Good food, tonics, and fresh air are all essentials in the treatment of such cases. The paper was illustrated by lantern slides, microscopic sections, and dissections of guinea-pigs.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—The Symptoms and Diagnosis of Malignant Diseases of the Larynx.—The Retinacula of Weitbrecht or Cervical Ligaments of Stanley.

A MEETING of this society was held on Dec. 11th, Mr. A. W. PRICHARD being in the chair.

Dr. EDGEWORTH showed a patient with Unilateral Neuritis of the External Popliteal Nerve.

Dr. PROWSE showed specimens from a case of Acute Nephritis in which the inferior vena cava was plugged with clot, leaving a small central channel; both pulmonary arteries were plugged with similar clots.

Dr. SKERRITT showed a specimen of Diffuse Cancer of the Stomach.

Dr. MICHELL CLARKE showed a specimen of Aneurysm of the Ascending Aorta communicating with the Superior Vena Cava, and Dr. SHINGLETON SMITH and Professor FAWCETT spoke on the subject.

Dr. WATSON WILLIAMS read a paper on the Symptoms and Diagnosis of Malignant Diseases of the Larynx, illustrated by patients and drawings.

Professor FAWCETT read a paper, illustrated with numerous specimens and diagrams, on the Retinacula of Weitbrecht or Cervical Ligaments of Stanley.—Mr. HARSANT and Dr. EDGEWORTH commented on the paper.

SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

Exhibition of Cases and Specimens.—The Radical Cure of Hernia.

A MEETING of this society was held on Dec. 5th, the President, Dr. PORTER, being in the chair.

Mr. SNELL showed: (1) A large number of Stereoscopes with Photographs illustrating Eye Operations and methods of examining eye patients; (2) an Electrolysis Needle, and introduced a woman with embolism of the central artery of the retina.

Mr. RICHARD FAVELL showed Gynæcological Specimens and gave particulars of a successful case of Nephrectomy.

Dr. SINCLAIR WHITE exhibited and made remarks on: 1. A Successful Case of Laminectomy for Complete Paraplegia due to spinal caries. The paralysis had been present for upwards of a year and had resisted seven months' treatment by continuous extension and other recognised expectant plans. The patient, a boy eight years of age, was operated on five months ago and could now walk well. The arches of the fourth, fifth, and sixth dorsal vertebræ were removed and a large cavity corresponding in extent to the body of the fifth dorsal vertebra cleared out. 2. Upwards of 300 Gall-stones removed from a woman. Dr. White, instead of stitching the cut edges of the gall-bladder to the wound in the parietes, tied them over a glass tube with a constriction at the point of ligature. This plan had answered well by saving time at the operation and by keeping the wound free from bile during its healing. 3. A Child with Supernumerary and Webbed Fingers and Toes.

Mr. CLYDE L. HAYES showed a case of Malignant Disease of the Tongue.

Dr. CUFF showed: (1) A woman with a large Venous Nævus of the Tongue; and (2) a boy aged ten with Enchondromata on the Left Hand.

Dr. ARTHUR HALL showed cases of Melanoderma and Syphiloderma.

Dr. GWYNNE read a paper on the Radical Cure of Hernia. He maintained that it was one of the most successful operations of modern surgery, relieving the patient not alone from grave inconvenience but also from the ever-present danger of strangulation. He advocated Macewen's method of stitching up the inguinal opening, but thought that ligature and excision of the sac simplified the operation and produced as good results, especially in children, as Macewen's mode of dealing with it. In Dr. Gwynne's opinion this applied with still greater force to congenital herniæ. In cases of the latter he preferred closing the ring with stout ligatures so as to restore the valvular condition of the canal, and subsequently ligaturing the sac as high up as possible without excising any portion, due care being taken not to include or otherwise injure the spermatic cord. A number of cases were exhibited dating from one to five years after operation.—The PRESIDENT, Dr. SINCLAIR WHITE, Dr. WILKINSON, Dr. GWYNNE, Dr. BURGESS, Dr. SWEETEN, and Dr. ADDISON discussed the cases and paper.

PLYMOUTH MEDICAL SOCIETY.

General Paralysis of the Insane.

AT a meeting of this society on Nov. 30th, Mr. SQUARE in the chair, a paper was read by Mr. A. N. DAVIS, the medical superintendent of the Borough Asylum, on General Paralysis of the Insane. After dealing with the symptoms, causation, and course of the disease, Mr. Davis pointed out the frequency with which this disease occurs amongst the annual admissions to the asylum, overcrowding, heredity, alcohol, and syphilis being the principal causes. No case had been reported as recovered, but remissions were relatively frequent, and these principally amongst the maniacal types. The melancholic cases were chiefly females, amongst whom no remission occurred, but on the contrary their disease rapidly progressed to a fatal termination within twelve months from admission. The cases of longest duration were not marked by any continuous mental excitement or severe convulsive seizures, but gradually drifted into steadily progressive dementia. Expansive delusions and pupillary anomalies characterised all the male cases, but beyond a feeling of passive contentment no such delusions were the rule amongst the female paralytics.—In the discussion which followed Dr. ALDRIDGE (Plympton House Asylum) remarked on the large amount of trouble which cases of general paralysis caused to asylum superintendents owing to the fragility of the bones in the second and third stages and alluded to the large proportion of general paralytics coming under Dr. Davis's care. He himself had only had seventeen cases in twenty-four years, or 8 per cent. of the admissions, male and female. The cases usually became rapidly fatal after admission into an asylum—in the third stage in about six months. He mentioned syncope as an occasional cause of death; he had never seen a female general paralytic, though such cases were not uncommon in the upper classes at the present day. He had seen no case absolutely cured. The prognosis was not difficult; when asylum treatment commenced a man's affairs should be put in order.—Mr. BULTEEL asked as to the part played by injury as a cause of general paralysis.—Mr. RIDER cited two fatal cases due to worry in temperate men of the Royal Navy.—Dr. PEARSE had only seen one genuine case.—Dr. MARIETTE also inquired as to injury in its causal relationship.—Mr. WHITEFORD asked whether influenza was a common cause.—Mr. SQUARE objected to the name as a misnomer for a collection of symptoms which indicated brain disease.—In reply Mr. DAVIS said two female cases—both in prostitutes—were rapidly fatal; he also cited a case where a second remission of symptoms had taken place. He said several cases now in the borough asylum were put down to influenza.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Exhibition of Specimens.—"Brief Sketches from my Breviary" &c.

A MEETING of this section was held on Nov. 22nd, Dr. LOMBE ATTHILL, President, in the chair.

Dr. W. J. SMYLY showed three specimens of Ectopic Gestation, all of which had been removed by operation, the patients making good recoveries. Double Pyosalpinx (two specimens): both recovered. Uterus removed in a similar case: abdominal section; attempt to remove tubes failed after rupture of one with extravasation of pus; vaginal hysterectomy; abdominal cavity shut off with Mikulicz's bag; recovery. Pedunculated Myoma larger than adult fist: the soft tumour was diagnosed as dermoid of left ovary, but was found to be a myoma; recovery. Myomatous Uteri (four specimens): hysterectomy in all cases; one death. Cancerous Tumour of Left Ovary: operation simple; sudden and severe internal hæmorrhage the same evening; abdomen reopened, bleeding controlled, and abdomen cleared of clots; convalescence uneventful until ninth day; complete paraplegia with anæsthesia, loss of reflexes in lower limbs, and paralysis of bladder; some fever for a week, then normal temperature, but paralysis persists.

Dr. E. WINIFRED DICKSON exhibited a Fibro-myoma removed from the Cervix Uteri. The patient was aged thirty years and had borne four children. The last pregnancy had ended a few weeks previously, at six and a half months; there had been severe hæmorrhage on this occasion, and the tumour had been then diagnosed. The symptoms had been slight, consisting only of a dragging sensation in the pelvis, dating for a year back, and some glairy discharge. The tumour was attached by a short broad pedicle to the front and left side of the cervical canal from the os externum nearly to the os internum. The posterior lip was hypertrophied, and the glands much enlarged. The tumour was removed with scissors, and the edges of the wound united with sutures. There was not much hæmorrhage. The patient made an uninterrupted recovery.—Dr. SMYLY remembered only two specimens of myoma of the cervix which had been shown to the Academy. One of these was shown by himself.—Dr. ALFRED SMITH remembered one which Dr. Macan had exhibited, and in which there were adhesions between it and the vagina.

Dr. ALFRED SMITH showed a Uterus with large Fibro-cystic Tumour which was removed by complete hysterectomy. The tumour extended one finger's breadth above the umbilicus, was very elastic, and growing rapidly. Palpation showed that the tumour had a long pedicle, and several small daughter cysts were growing from the fundus of the tumour. Vaginal examination: The uterus was separated from the tumour by a broad pedicle; its fundus was well studded with small fibromata, and was greatly enlarged. The diagnosis of ovarian tumour was made. Abdominal section revealed a fibro-cystic pedunculated tumour growing from the left side of the uterus, and the fundus of the uterus invested with small fibroids. The entire removal of the tumour and uterus was determined upon.

Mr. R. A. FLYNN exhibited a Uterus removed by Vaginal Hysterectomy for Cancer. He said:—"A woman aged forty-six had ten children, and at the birth of the last, four and a half years ago, I attended the patient. She consulted me in January last for backache and pain in the left side. On vaginal examination I found the os uteri turned towards the anterior vaginal wall, the cervix lacerated, and through the posterior vaginal wall I found the corpus uteri lying backwards on bimanual examination. There was retroversion of the uterus, which was quite movable; the adnexæ were normal; the sound passed two and a half inches, causing neither hæmorrhage nor pain; the point passed backwards. The speculum showed nothing abnormal. The uterus was easily replaced bimanually, and a No. 8 Smith's pessary was introduced. I saw the patient a week afterwards and found the uterus in good position and her symptoms relieved. I did not see the patient again until Nov. 3rd, when she consulted me for menorrhagia which had lasted two months. On vaginal examination I found the cervix enlarged, with its tissues so friable that it could easily be broken down with the finger, causing considerable hæmorrhage. On bimanual examination I found the uterus normal in size and position, and the adnexæ normal; the speculum showed a large ulcerated cervix. I removed the pessary and the uterus went very quickly into the position of retroversion. I now removed a piece of the cervix with a knife for microscopic examination, and sent the tissue removed to the Clinical Research Association, London, and received the following report on Nov. 9th:—'The specimen removed from the cervix uteri shows an early infiltration of the tissues with a squamous-celled epithelioma.' Dr. Smyly kindly saw the patient with me on Nov. 11th, and agreed with me that it was a favourable case for vaginal hysterectomy. The operation was performed on Nov. 14th, the broad ligament being secured with Landon's clamp forceps; the clamps were removed in forty-eight hours. The patient has up to the present (Nov. 22nd)—nine days after the operation—made an uninterrupted recovery. The case I regard with hopefulness, as I was fortunate in getting her at an early stage, and consider that there is a good chance of the non-recurrence of the growth."

Mr. WALTER BERNARD read a paper entitled "Brief Sketches copied from my Breviary, of the priceless sayings of other men, with some remarks showing what valuable outposts they were in helping me to extend the boundaries of my knowledge, and to avert death while practising the obstetric art." He said:—"While engaged in general practice many as well as myself cannot but feel how essential it is for the common good, as well as for an example to those who follow, that some proof at certain stages of our careers ought to be given that we are keeping our lamps well oiled and trimmed during the well-timed changes in preventive medicine. From my breviary I shall awaken some of the lore of the past and present. From the time of Hippocrates down to our own times puerperal fever, its lore and complications, were mystified and vague, and not until 1860 was the disease clearly defined. Strother, in 1718, was the first to give it the name of puerperal fever. Smellie, a great compiler of the thoughts of other men, then came to the front, making known his mistakes and failures, and being no "secret monger" he did not fossilise his experience. Since Smellie's time much has been written on puerperal fever, but it was not until the great discussion on it, held in London in 1875, that its accurate relations to infective diseases were made apparent. Eclampsia, taken by itself, is rare. A few cases follow one another, not often seen by a medical man until soon after a seizure. During utero-gestations there are occasionally marked signs of a coming storm which will be found in books, and which by proper treatment can be frequently averted. The headache, giddiness, failure of sight, and œdema of limbs sound a warning note. As to treatment, one of the old rules holds good: if plethoric, bleed; if anæmic, do not. Administer chloroform, hydrate of chloral, enemas, purgation, and the hot-air bath. For the induction of premature labour no absolute rules can be enforced, but in this state of things a level-headed consultation is absolutely necessary. Some of the prodromata of the so-called functional and organic hemiplegia are curiously alike, such as the numbness, giddiness, tingling, dragging, and cardiac and vascular changes. Some of these had a gouty or syphilitic history, and early arterial degenerative changes appeared in some before middle life. A few had a history of chorea in childhood. My records show that too much dependence was placed on the local treatment of dysmenorrhœa and too little on the general management of patients as regards condition and family history. In placenta prævia the well-known and carefully thought-out rules ought to be followed. Ancient forceps, like crania, are of much interest, as they exhibit the intelligence of men coequal with their cranial formations. Laceration from the driving power of ergot and the untimely and unskilled use of the forceps is almost a thing of the past. Their skilful management, together with that of the perineum, need not be gone into. So far back was external pressure used in retained placenta that it was unknown in remote antiquity when it commenced. Patience in the vanished past, as well as in Guillemans's time in 1609, was recommended. It was not even known when the 'Dublin method' commenced, which Credé of Leipzig brought under the notice of the German School in 1860, modifying it according to his views. At one time pressing off the placenta had its advocates. The practice did not last long when it again came into fashion some years ago. Post-partum hæmorrhage is not common now, as medical men and nurses are better trained, and the causes are more fully investigated. But yet occasional

cases are met with, and consequently every medical man's ether and uterine syringes ought to be always antiseptically ready and in good working order. And send at once for the nearest help, throwing reputation, money, and mutual distrust aside while life is swinging in the balance. Let us do our duty at any cost, even at the risk of our own lives; but to save lives outside we ourselves must work, and if we work honestly we can be independent and rise above the level of all that is acrid, trivial, and temporary."—Dr. MACAN said they had listened with great pleasure to Mr. Bernard's paper, which had touched on almost every subject of midwifery. They felt very much indebted to him for coming from Londonderry to read it.

SECTION OF PATHOLOGY.

Tumours of the Kidney composed of Suprarenal Tissue.

A meeting of this section was held on Nov. 29th, Dr. CONOLLY NORMAN, President, being in the chair.

Dr. MCWEENEY described two new cases of Tumours of the Kidney composed of Suprarenal Tissue and discussed the subject, which has hitherto escaped notice from English-speaking pathologists. His first case was that of a left kidney successfully removed by Mr. Coppinger at the Mater Misericordiæ Hospital in March, 1892, from a woman aged fifty-three, who is still alive and well. The lower part of the kidney is converted into a large cyst, from which a bowlful of brain-like hæmorrhagic material was evacuated during the operation. The walls of the cyst are ragged and covered with adherent masses of tumour tissue. The second case was that of a woman aged thirty-eight from whom a huge mass of confluent tumour nodules occupying the position of the left kidney was removed by Mr. Lentaigne at the Mater Misericordiæ Hospital last September. The only recognisable part of the kidney left was its upper extremity. The nodules were not unlike liver in appearance and consistency; many were as large as the closed fist; all were distinctly encapsuled, and none showed signs of advanced degenerative change. Microscopically these two tumours agreed in their close resemblance to the suprarenal cortex. They consisted of large polygonal or cubical epithelial cells, with a small, round, centrally placed nucleus, arranged without intercellular substance in elongated rows or circular groups separated by blood capillaries. The tumour cells were placed directly on the capillary wall, which simply consisted of a line of endothelial nuclei. In the first tumour the deposition of fat and glycogen was a marked feature. There was but little fat and no glycogen in the second. This would appear to show that the deposition of glycogen is not, as Lubarsch supposes, an essential feature of tumours of this kind, but is merely associated with retrogressive change. The origin of certain tumours of the kidney from suprarenal "rests" was first pointed out by Grawitz in 1883. His results were extended and generalised by Horn. Dr. McWeeney came to the same conclusion as Lubarsch—viz., that they must really be considered as derived from dislocated suprarenal elements. Thirty-two such cases are now on record, many of which took a malignant course and formed metastatic deposits in various organs. Nephrectomy had proved a very fatal procedure even in the absence of peritonitis and uræmia. In one of the cases now brought forward two pounds of morphologically perfect suprarenal cortex, free from degenerative change, were present in the body, a fact not without significance in view of the high physiological activity now known to be possessed by this tissue.—Dr. O'SULLIVAN said that when in Vienna last summer he had seen two of these growths. The first was like Dr. McWeeney's first case. It was an encapsuled mass confined to the upper part of the kidney, and consisted of pultaceous material infiltrated with blood. There was no metastasis. No microscopic examination was made. The other was of more pathological importance, since in the kidney itself there were several masses of the same character, but also a considerable amount of metastasis in the bones.—The PRESIDENT said the Academy should be congratulated on having received such a learned paper from Dr. McWeeney. There was a case published in the *Journal of Pathology*, about three years ago, by Dr. Kanthack and Dr. Rolleston resembling in many ways that of Dr. McWeeney. Another case, not mentioned by Dr. McWeeney, was published in France in 1882 of adenomata of the kidney.—Dr. MCWEENEY, replying, said that he had not as yet been able to look up thoroughly the English literature on the subject. He had, however, consulted Dr. Rolleston's Lectures on the Suprarenal Capsule, which were most exhaustive. In the class of cases Dr. McWeeney was referring to, the tumour originated in the kidney, altogether apart from the suprarenal. In both of his cases the tumour originated in the lower end of the kidney. The fully formed tissue of these tumours is not like urinary tubules. In the cortex of the human suprarenal, but more especially in that of the higher mammals, pseudo-tubular structures of the same kind were found by Creighton, Marchand, Pfaundler, and others.

Reviews and Notices of Books.

Archæological Survey of India: The Bower Manuscript. Facsimile Leaves, Nagari Transcript, Romanised Transliteration and English Translation, with Notes. Edited by A. F. RUDOLPH HOERNLE, Ph.D., Principal, Calcutta Madrasah. Part II., Fasciculus II. Published by Order of the Government of India and under the Patronage of the Bengal Government. Calcutta. 1895.

[SECOND NOTICE.]

WE took the opportunity of giving some account of this very interesting archæological publication in October last year,[1] after the appearance of the first portions of the work, and referred more especially to the main portion of the manuscript containing a treatise on Medicine. The second fasciculus of the second part of the publication is now before us, completing the medical portion, or rather as much of it as was saved from destruction. There are fourteen chapters on thirty-one leaves; that portion which contained the fifteenth and sixteenth chapters is lost. The size of separate leaves is about 11½ in. by 2½ in. The writing, in Nagari character, is in black ink, mostly on both sides of the leaves.

"The whole manuscript when discovered consisted of fifty-six leaves[2] of birch bark, some in single thickness and others from two to four thicknesses. Some of the leaves appear perfectly fresh and clear, others are much discoloured. All are very brittle and tender. The leaves are enclosed between two boards, and a string runs through them." The *whole* MS. consists of five distinct parts, and is written almost entirely in *slokas* or verses: firstly, the medical portion now consists of thirty-one leaves; the second part contains a collection of proverbial sayings, on five leaves; the third part has a story of how a charm of snakebite was given by Buddha to his disciple Ananda whilst staying in the Garden of Anathapinda, on four leaves; fourthly, another collection of proverbial sayings, on six leaves; and, fifthly, a fragment of another medical work, on five leaves. Besides these there are a few detached leaves unconnected with one another and with those of the larger portions.[3]

Professor Hoernle, with rare erudition and perseverance, was able to interpret the meaning of the whole MS., which he transcribed in the original Nagari with a transliteration into Romanised characters, and translated the medical portion of it into English, which is now completed. Professor Hoernle adds very copious notes and references, comparing them with other Hindu medical treatises, from which it appears that the prescriptions of the author occur almost word for word in the works of Charaka, Susruta, and Vangasena, the old Hindu medical and surgical authors.

Our interest very naturally centres around the now completed medical portion of the MS., the "Navanitaka," or "The Cream," as its author calls it. In our first notice we have mentioned the division of this treatise into sixteen chapters, and have culled from it a curious prescription, containing thirty-six ingredients, for a powder which is to

[1] THE LANCET, Oct. 20th, 1894, p. 918.
[2] Proceedings of the Asiatic Society of Bengal, 1890, p. 223.
[3] Journal of the Asiatic Society of Bengal, 1891, p. 80.

cure almost every conceivable disease the flesh is heir to, and if taken for two months without interruption it will secure the patient's life for one hundred autumns. The author, whoever he may have been, was a Buddhist by religion and wrote in Sanskrit, although not in the most classical style of that language; the copying of the MS. was done by several scribes, portions of it being written in a careless and slovenly manner.

Beyond its antiquity, as the most ancient medical manuscript known to exist in the Sanskrit language, dating from about the fifth century of our era, this work possesses no special value for medicine of the present day. Verses 43, 45, and 50, however, contain the following sensible doctrine:[4] "The normal condition of elements, health, energy, and long life are all dependent on the digestive faculty ..... through all these, life of living beings is prolonged. Hence one should first of all examine the state of the digestive faculty ..... a wise physician will at all times, in all diseases, first direct his treatment to the proper regulation of the digestive faculty." This very much coincides with the advice given by an eminent physician recently deceased to a well-known patient. There are prescriptions for treating cases of cholera, diphtheria, stone in the bladder, &c.

We feel we ought not to conclude our notice of this manuscript without giving an account of its discovery by that indefatigable traveller, Captain Bower, and the romantic circumstances connected with it. Captain Bower says: "While at Kuchar, in Kashgar, Eastern Turkestan, a man offered to show me a subterranean town, provided I would go there in the middle of the night, as he was frightened of getting into trouble with the Chinese if it was known that he had taken a European there. I readily agreed, and we started off about midnight. ..... The subterranean ruins of Mingai, to which my guide had promised to take me, are situated about sixteen miles from Kuchar, on the banks of the Shahyar river, and are said to be the remains of Afrasiab's capital. ..... The same man procured me the packet of old manuscripts. They had been dug out of the foot of one of the curious old erections (Buddhist *stupas*) about fifty to sixty feet high, broad in proportion, and resembling somewhat a huge cottage loaf, of which several are to be found in the Kuchar district."[5] This is the find to which Professor Hoernle gave the appellation of "Bower Manuscript" in honour of its discoverer.

On Brain and Nerve Exhaustion (Neurasthenia) and on the Nervous Sequelæ of Influenza. By THOMAS STRETCH DOWSE, M.D., F.R.C.P. Edin., &c. London: Baillière, Tindall, and Cox. 1894. Price 2*s.* 6*d.*

AT the last meeting of the British Medical Association but one the discussion on Neurasthenia and its Treatment was introduced by Dr. Savage in the following words: "What is neurasthenia? There was once a professor who, being asked what he knew upon a certain subject, replied, 'Nothing; I have not even lectured on it.' This is rather how I feel in relationship to the subject on which I am to open a discussion. We have a disorder whose very name is not without difficulty, for the classical scholar only recognises it as neurasthēnia, while we medical men are content to call it neurasthēnia."

In face of so frank a confession by an acknowledged expert it was with no great expectation of enlightenment that we took up Dr. Dowse's *brochure*, albeit a carefully revised fourth edition. Before embarking upon a systematic perusal of the work we commenced our task by glancing rapidly through the pages, which are admirably printed. Almost at once our attention was arrested by the subjoined passage: "Occasionally a spark of science scintillates in the ever-increasing and heterogeneous detritus which man is vain and pleased and conceited enough to call knowledge. This scintillation is wisdom. The cosmology of nature, the evolution, devolution, and involution of conceptual properties, based upon analytical and synthetical deduction, constitutes an appreciative something which we call 'facts in nature.' The revelation through the agency of perception and reflection by coördination and correlation develops faculty; and when such is the outcome of an initial and intuitive potentiality the giant genius springs into existence and illumines by intensity and expansive radiation."

After this we felt that if it were a fair sample of the remainder we had, indeed, embarked upon an arduous voyage. On the very next page we found it stated that, "in dealing with human life and thought, we have in the plainest possible language to deal with human individualities." There seemed to be promise of better things here, and we consequently felt emboldened to persevere. Soon another paragraph stood out, as it were, from the luxuriant context: "Conceit and ignorance are usually twins by birth; and even by culture they are both propagated by the same soil and nourished by the same elements; they are both intolerant, selfish, cruel, and utterly devoid of reciprocity, sympathy, or charity." Then came: "As a physician I should indeed be a dreaming dotard if I failed to comprehend, to realise, to estimate, and to value the significance and the importance to mankind of our constant and progressive accumulation of knowledge. ..... No one doubts the enormous power and self-sufficiency of knowledge"—*id est*, of the "heterogeneous detritus," &c., of a page or two before! The following passage is even still more remarkable: "Does the cultivation of science, upon its purest scientific lines, ennoble the nobility of human nature, or has it not a tendency to elaborate certain faculties at the expense of others, and thus lead to prejudice, bigotry, jealousy, and conceit? Power, and especially self-acquired power—for power born is vastly different to power bred—has through all ages been attended with vainglory and a supreme admiration for self. Has science altered this? No. It cometh like the wind and goeth like the wind. It seems as though it were the final links in the great and continuous chain of evolutionary conditions." In the face of such high-strung eloquence it may perhaps appear a trivial interruption to inquire where the final links in a continuous chain are situated?

Having managed to read the eight introductory pages of the book, we became aware of some alarming symptoms not unconnected with exhaustion, and had it not been for Dr. Savage's encouraging opinion that neurasthenia is seldom caused by brain fatigue we should incontinently have given in. Fortified by this authoritative dictum, we ventured once more on our course. Soon we reached a paragraph which, although inordinately long, it is really quite impossible to leave unquoted. Here it is: "The greatest learning, sagacity, and knowledge have been expended to unravel, evolve, interpret, and arrange the connexions which link and bind together the physiological, anatomical, and pathological signs and symptoms which are developed, extracted, and produced by some unknown factor directed in the evolution and dissolution of that strange, wonderful, related, but to us exceptional, region which forms an oasis between the physical, the material, the moral, the intellectual, the mental, the ideational, the metaphysical, and the psychical, and which, when viewed from the hopeless belief of the physicist, the materialist, and the scientist, forms a realm entirely subordinate to the great evolutionary doctrine, which at one time was looked upon as the revolutionary, transmitting, and metagenetic power which should bring light out of darkness

[4] Ibid., p. 131.
[5] Proceedings of the Asiatic Society of Bengal, p. 221, 1890.

and convert an unknown problem of infinite omniscience to the level of the sagacity, the intelligence, and the understanding of the mind of man. When we look around and note the feeble, weak, illogical, impotent stuff ....." The passage does not really end here, but space is too important to be recklessly filled.

Proceeding on our weary quest we next arrived at eight "propositions ..... of interest." The first two are appended: 'That in neurasthenia there exists a want of correlative integrity between the cerebro-spinal and sympathetic centres, and, in my opinion, this is the fundamental cause, and is often but not necessarily hereditary. That there is defective antagonism between the centres at the various levels, cerebral and bulbo-spinal, by which a process or processes of inhibition are started and maintained. Governing and controlling centres are subjugated by restraint, so that controlling power is greatly diminished."

Peradventure the reader will understand what is meant by "correlative integrity" and "defective antagonism" in this connexion? A little further on the symptoms of neurasthenia are stated in great detail under a dozen heads. No one with the smallest tendency towards hypochondriasis should read this portion of the book unless he wants to be frightened out of his wits. The succeeding thirty pages or so, treating as they do *de omnibus rebus et quibusdam aliis*, must be left unsurveyed.

Concerning treatment we find "each case must be studied closely and carefully by itself. I must say that this has been my own experience." Dr. Dowse does not believe in iron and quinine or in electricity for neurasthenia. Opium "continued for some weeks, and it may be months," is his dangerous sheet anchor, in spite of the admission that "it may be necessary to increase the dose." He also recommends full doses of hydrate of chloral, and this notwithstanding his own warning with reference to alcohol: "It must be remembered that we are dealing with a class of people whose resisting power is of the lowest order—who are liable at any moment to give way to any idea which is uppermost in their vacillating minds and to gratify every passion."

Some very elementary matter is next inserted with regard to heat-producing and flesh-forming compounds; and interspersed there are many remarks about foods, children, dyspepsia, gout, koumiss, Board schools, and dipsomania, which for want of space and other reasons cannot be further alluded to. The neurasthenic dietary formulated by the author must not, however, be dismissed in any such summary manner. His "general advice" to his patients on the subject is as follows: "Don't rise until eight o'clock in the morning. ... ... Take breakfast with fish or a well-cooked chop or rump-steak. ... ... At eleven o'clock take a glass of dry sherry and a biscuit, or a new-laid egg beaten up with port wine. ... For luncheon, at half-past one, take oysters.....(or) a basin of really good soup, which should be followed by a cut of mutton or beef from the joint.....You may drink a wine-glass of whisky, with a bottle of Apollinaris. At 4 o'clock a small cup of immediate tea may be taken with some dry biscuits—avoid the sweet, tempting cakes which are now so freely supplied with this meal.....The dinner should never consist of more than four courses—namely, soup, fish, joint, and game. Never mix your wines, but vary them every three or four days, sometimes taking a dry champagne, at other times a good well-seasoned, sound burgundy." That's all. There is absolutely nothing ordered for supper.

Transactions of the West London Medico-Chirurgical Society. Vol. VI. London: Baillière, Tindall, and Cox. 1895. Price 5*s*.

THIS volume is edited by Mr. J. H. Menzies and Dr. Clemow, and shows unmistakable signs of the flourishing condition of the society. Abstracts of very many interesting papers are given as well as a full report of the two Cavendish Lectures, one by Mr. Henry Morris on Some Changes in Surgical Opinion regarding the Diseases of the Urinary Organs, and the other, by Sir William Broadbent, on Some Points in the Treatment of Typhoid Fever. The reports of the clinical evenings are highly instructive and give the accounts of a large number of very good cases which were shown, and altogether this volume is well got up and presented in a readable form.

The Practice of Massage: its Physiological Effects and Therapeutic Uses. By A. SYMONS ECCLES, M.B. London: Macmillan and Co. 1895. pp. 375. Price 7*s*. 6*d*.

IN spite of writings neither obscure nor few, it may be safely asserted that a really scientific exposition of the much-abused subject of massage has hitherto not been available in English medical literature. To a great extent this gap has been filled by the monograph before us, which deserves to be widely read and studied, for its chief merit lies in the exposition it gives of the physiological basis of this therapeutic measure and the appropriate application of it to the relief of many a chronic malady. Nor is it possible to peruse its pages without being convinced that the art of the masseur is one not easily acquired, and demanding of its practitioner a more than superficial knowledge of bodily structure and function. It is, moreover, clear that it is not possible, even with such detailed descriptions as are here given of the methods of "effleurage," "pétrissage," "tapotement," "vibration," and "massage à friction" to convey to the learner the more or less delicate differences of manipulation that can only be imparted by practical demonstration, whilst it is also obvious that the practice, to be thorough and effective, demands no little dexterity and endurance. From all which it follows that there must be much so-called "massage" which is far from attaining the height of excellence to which the author points, whilst from the therapeutical standpoint the method is likely to suffer from mal-application in some cases and unsuitable employment in others. Dr. Symons Eccles writes with a confidence born of experience, and on p. 263 he deplores the "apathy which still pervades the medical world in this country" as to the proper supervision of massage; and doubtless he has reason for this remark, for any therapeutic measure is liable to fall into discredit if it be wrongly applied or ignorantly perverted from its main object. In the same connexion he goes on to say that "it is unfortunate, both for practitioners and the public, that no measures have yet been taken to provide for the efficient teaching and practice of massage and medical gymnastics in the great schools of medicine attached to our hospitals, in which thousand of cases must exist in want of such treatment by more careful and thorough massage than can be obtained under present conditions." These remarks are made in regard to the treatment of chorea, a malady in which regulated muscular exercise is *primâ facie* a rational course to encourage.

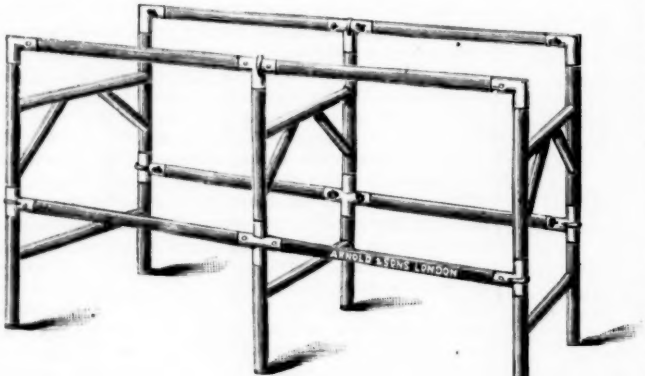
The bulk of the work is naturally occupied with the therapeutical application of the method. That massage, from its effects on the circulation, promotes metabolism, and thereby improves nutrition, explains in general terms the good resulting from its use in many chronic affections of skin, joints, blood, muscle, and nerve; but that it is also of direct service as a means of mechanical stimulation of nerve and muscle is also manifest. Some of the most interesting records contained in this book are of cases of chronic gastric disorder and habitual constipation—conditions which prolonged drug treatment often tends to aggravate rather than to relieve—where no doubt can remain of the efficacy of massage treatment. Equally instructive are the descriptions of various forms

of nervous disease, organic as well as functional, which are amenable to the same therapeutic measure. Indeed, it is in the neuroses especially that massage has had some of its most striking successes, but Dr. Eccles is emphatic in the opinion that for its proper guidance and conduct it is essential that the medical man himself should be fully cognisant of its powers and their limitations. If by this work he succeeds in gaining for the practice more serious attention in this country at the hands of those who prescribe it, he will have done not a little to redeem the practice from the subsidiary position that it mostly occupies. Whilst making every allowance for mistaken conclusions, there remains a sufficient body of evidence to prove that the method of massage, properly and scientifically applied, is physiologically correct, and therefore rational and appropriate in the treatment of diseases.

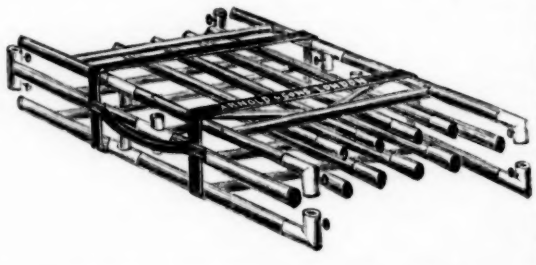
New Inventions.

A PORTABLE BAMBOO OPERATING-TABLE.

THE surgeon upon arriving at a private house where preparations have been made for an operation usually finds a kitchen table or perhaps even a dining-room table of, say, three flaps, enough to seat sixteen guests comfortably, got



ready to support a patient weighing perhaps 8 st. If the assistant had merely to look at the proceedings with a spy-glass across the vast superfluous expanse of table there would still be grave inconvenience caused by the little space left for instrument tables, &c. I generally ask permission to



obtain from the upper storeys two plain deal dressing tables. These, though often rickety, serve, when divested of their pink calico hangings, to support the weight of the heaviest man, fairly distributed as it is over the eight legs of the two tables; and I am certain that, at least for private use, a far lighter operating-table would suffice than any hitherto described.

Messrs. Arnold and Sons, London, have made for me one with a frame of stout bamboo with aluminium furling rod-joints fixed by thumb-screws. The top is of stout water-proofed canvas, descending eight inches down the sides and ends and removable. The whole table can be washed with soap, soda, and warm water just as easily as the waterproof sheeting between the carbolised towels and the patient, and is just as aseptic. The table can be tilted to an angle and kept so by placing the legs of one end on a box. The weight without the cover is 25½ lb.

C. B. KEETLEY, F.R.C.S. ENG.,
Surgeon to the West London Hospital.

THE "EXCELSIOR" BED SUPPORT.

THIS bed support was first brought into use at the Birmingham General Hospital during the present year, it being designed to prevent patients from slipping down in bed. It consists of a strip of woven wire mattress webbing two feet long and five inches wide, covered with a cushion and fixed in a sloping position on vertical brackets attached to a horizontal board. Straps or bands of stout ordinary webbing fastened to the ends of this board and buckled to the head of the bedstead keep the support in any desired position on the mattress. When the patient is in the recumbent attitude with his knees flexed and the back of his thighs resting against the cushion of the support, he is securely maintained in a comfortable position free from any tendency to slip towards the foot of the bed, for the pressure of his weight is resisted by the straps buckled to the head of the bed. The appliance, in fact, imparts to an ordinary mattress some of the convenience of a reclining chair in which there is a hollow to receive the lower part of the back. The manufacturers are The Bed Support Company, The Butts, Coventry.

ICKRINGILL'S PATENT HYGIENIC AND ELASTIC CLOTH.

THE special characteristic of this cloth depends on the circumstance that its thickness and softness—equal to those of stout flannel—are produced by a peculiar arrangement of the fibre, which is brought out endways on one of the sides of the fabric, giving a surface somewhat like thick short fur. The longitudinal threads of the cloth, being of caoutchouc render it very elastic, while it is pleasantly smooth, soft, and velvety to the touch and thoroughly pervious to air and moisture. A notable advantage of this material is that it may be washed with soap and hot water without its elastic properties being impaired and without the troublesome tendency, as in flannel, to become felted. Abdominal belts are manufactured of the cloth, a purpose for which it seems to be very well suited, as it not only affords the necessary mechanical support, but fits smoothly in consequence of its elasticity, secures protection and warmth, and does not confine the moisture of the skin. The cloth is made of varied strength, and one of the thinner qualities is made up into roller bandages of the ordinary form. The manufacturers are Ickringill's Patent Hygienic and Elastic Cloth Syndicate, Limited, 35, Devonshire-street, Keighley, Yorkshire. Messrs. Maw, Son, and Thompson, Aldersgate-street, are the London agents.

WEST-END HOSPITAL FOR NERVOUS DISEASES, WELBECK-STREET, W.—Sir W. H. Broadbent has accepted the post of consulting physician on the staff of this hospital, rendered vacant by the death of Dr. Bristowe. Owing to the resignation of Dr. Hughes Bennett on account of ill-health Dr. T. Outterson Wood becomes the senior physician, Dr. W. Wallis Ord is promoted to second, and, by arrangement with Dr. de Watteville, the beds allotted to the third physician to in-patients have been taken over by Dr. Fletcher Beach.

THE LANCET.

LONDON: SATURDAY, DECEMBER 21, 1895.

THE paper of Dr. NEWSHOLME on a National System of Notification and Registration of Sickness communicated to a meeting of the Royal Statistical Society, and reported in abstract in another part of our present issue, will be read by all who feel interested in the national health. The audience to which Dr. NEWSHOLME mainly addressed himself was the Statistical Society, and through it the public. His views met with more criticism than concurrence, but all admitted the interest of the paper as a whole, and all would be ready to admit that the system of registration which he advocates is the logical completion of the system of death registration. This system originated in this country, and has been copied by our neighbours of the Continent. Dr. NEWSHOLME would persuade us to follow their example in the registration of sickness. It is impossible to deny that the registration of mere mortality affords very inadequate information. Many grave diseases causing extensive suffering and temporary disability for the duties of life do not cause death. It is very gratifying to know that, however backward we are in this country in the registration of sickness, we have long had men amongst us who were alive to its importance and who have more or less carried it out on a limited scale and in a voluntary way, either alone or in combination with those whom they were able to entice into coöperation. Amongst them Dr. NEWSHOLME made honourable mention of Dr. (now Sir) B. W. RICHARDSON, Dr. RUMSEY, Dr. ARTHUR RANSOME, and others.

In 1869 Mr. GOSCHEN was approached as President of the Poor-law Board by a deputation headed by Dr. RICHARDSON, urging legislation to procure the registration of sickness. Mr. GOSCHEN expressed hearty approval of the suggestion, but pointed out—and for this the profession cannot be too grateful to him—that care should be taken not to impose additional labour on the Poor-law officers. It would even seem that in the beginning and middle of last century there were men who advocated the registration of disease. But with all this historical advantage and impetus we are behind other nations—Belgium, Germany, Denmark, Sweden, and Norway. It is true that lately in the Factory and Workshops Acts sections are found requiring notification of cases of poisoning from lead, arsenic, phosphorus, or anthrax to the Chief Inspector of Factories at the Home Office, also to the inspector and to the certifying surgeon for the district. But there is no attempt in these Acts to require a return of general sickness, or even of any of the more common diseases which in some of the countries specified by Dr. NEWSHOLME are reported. In some of the countries named by Dr. NEWSHOLME a large number of constitutional diseases are required to be reported; also a large number of local diseases. The hospital statistics of the German towns include every individual infectious disease, and others also, to the number of 144. Syphilis and gonorrhœa, phthisis, pneumonia and pleurisy, chronic alcoholism, acute rheumatism, and other rheumatic affections are among the diseases included in the hospital statistics. Dr. NEWSHOLME seems to think it would be possible and proper for the State to require similar returns from its own hospitals and from hospitals supported by charity. Lord THRING and others failed to see by what right the State could demand returns from private hospitals sustained by charitable voluntary subscriptions. The fact is that in this country the people have two marked characteristics which ardent sanitarians are prone to forget—they are jealous of any unnecessary encroachment on their personal liberty and privacy, and they do not like too much refinement in legislation. They would not tolerate the method described in an interesting speech by Dr. WEEKS of Portland, Maine, U.S.A., as the legal one in his State—the placarding in scarlet of the dwelling in which there is a case of scarlet fever or diphtheria or small-pox. This would seem a cruelly excessive publication of the domestic affairs of a British citizen. And if they submit to registration or notification of disease it is not that they like it, or for its own sake. As Lord THRING said, they only submit to it for the ulterior purpose of isolation. If notification is to have no consequence or efficiency, it will be sure to be resented and removed. This brings us to the real test of such measures as the registration of sickness proposed by Dr. NEWSHOLME, and to a perception of the force of the strong current of criticism with which they were received. He was careful to say in his reply that it was far from his intention to recommend a general registration of sickness. In the paper he argued that everything but "age" itself came within the care and the concern of preventive medicine; and so it does—but such excessive care is apt to be resented by ordinary people, and by the ordinary member of Parliament, who is bound to respect their views. If there were any strong case made out for returns of any given disease this reluctance would give way, especially if it were shown that such returns would lead to any practical remedies that legislation could promote. And this is practically all that Dr. NEWSHOLME wants. At any rate, it is all that he is likely at present to get. He would do well to define a few—a very few—diseases of the constitutional class on which information is most wanted, and to begin any system of registration of sickness with them. Public opinion would sanction some extension of the notification principle in regard to other infectious diseases than those now notifiable. They are clearly a class by themselves. They endow the patients suffering from them with a power of affecting and injuring others, which gives these others an interest in, and even a right to interfere with, their personal liberty. But the case of incommunicable diseases is very different. It may be so extensive and so injurious, and withal so amenable to legislative measures, as to justify State notice. But all this has yet to be made clearer before it can be embodied in practical legislation.

Dr. NEWSHOLME realises that when a wider notification is called for it will necessitate a revision of the notification fees. It should be clearly understood that medical men

are to be recompensed for the imposition of such additional work, either by direct payment or, as he suggests, by additional legal guarantees for the protection of the profession from vexatious prosecutions.

THE subject that has been under discussion at the last two meetings of the Royal Medical and Chirurgical Society is one which has often exercised the minds of thoughtful clinical observers, and one, too, in which renewed interest has been taken since the tacit assumption that infective diseases are due to the invasion of the body by specific parasitic organisms. The phenomena of the diseases in question are in the main explicable on the theory of the implantation of germs which undergo continuous development in the blood and tissues, inducing the morbid changes peculiar to the special disease of which they are the cause. The stages of incubation, of active manifestation, local and general, and of decline and recovery concord precisely with the development, activity, and ultimate fate of the micro-parasites in their struggle with the cell forces of their host. It is also quite in agreement with what is known concerning the life-history of allied non-pathogenic organisms, that under appropriate environment and in suitable soil the development of the pathogenic parasite is favoured and encouraged. Similarly the facts of immunity are capable of satisfactory explanation from analogies derived from our knowledge of the conditions of life in the vegetable world, as in the exhaustion of the soil, although it may well be that other conditions are operative in the case of the animal organism for which no counterpart can be found in the macrocosm. At any rate, the present position of pathological interpretation in this matter is this general admission of the fact of pathogenic germs as the essential factor in diseases belonging to the so-called infective groups. The discovery of the actual microbes in certain of these diseases, and the exhaustive studies that have been made of their morphology and development in artificial media, have not only added to the clearer comprehension of their *rôle* in disease, but have amply sanctioned the inference of the existence of like agencies in allied affections.

If, then, what is known of the ordinary clinical history of infective disease harmonises with observed facts of the life-history of specific bacterial organisms, it becomes a matter of importance to determine whether variations in the course of the former are concomitant with, or, rather, consistent with, variations in the conditions of the latter. Perhaps the most remarkable of such departures from the ordinary evolution of a disease is the reappearance, after a long interval, of the manifestations peculiar to it, a recrudescence of symptoms which can only admit of one of two explanations—either that it is due to fresh infection or that it means a reawakening to vitality of germs long since implanted in the body, which for some reason or other have fallen into a state of quiescence or dormancy. This is the question which has been so ably debated at the Royal Medical and Chirurgical Society, the general outcome of which debate has undoubtedly been to strengthen the belief in the latency of disease germs, and this from direct bacteriological evidence as well as from clinical and pathological observations in the human subject. As Mr. HUTCHINSON, in his admirably suggestive remarks at the opening of the debate, observed, a distinction must be made between true latency and a latency which is only simulated. In the first the assumption is that the disease germs are actually in a state of quiescence, as dormant in the tissues of the body as the grains of wheat in the Egyptian sarcophagus, awaiting only some special condition to restore them to vitality; in the other instance, they may be supposed to be silently exerting their influence, but without any overt manifestations of their presence. The adoption of a belief in true latency, which, as Dr. WASHBOURN showed, is consistent with bacteriological knowledge, would certainly afford an explanation of facts in the history of syphilis, tuberculosis, and leprosy which were so well advanced by Mr. ERNEST LANE, Dr. KINGSTON FOWLER, and Dr. ABRAHAM. The view, however, is capable of very wide application, as Mr. HUTCHINSON indicated in reference to vaccinal erysipelas, and Sir W. BROADBENT in respect to typhoid fever. It may also be applied to the explanation of direct inheritance, not only in syphilis, but in regard to tuberculosis, thus reinstating a doctrine somewhat shaken of late years by a too rigid belief in the contagiousness of tubercle.

One aspect of this doctrine as an alternative to that of reinfection from without is deserving of careful analysis. It was referred to by several speakers, and has been often discussed elsewhere. This is the determination of the conditions that are requisite for calling into activity the dormant microbes. More than one speaker alluded to the influence of traumatism as an apparent exciter of latent infectivity. In some cases this is fairly obvious, but in others it is very mysterious and inexplicable. Why should injury of a joint evoke tuberculosis in it? or why should a slight blow be followed by tuberculous meningitis? Inexplicable as this agency is, it is not more so than the admitted agency of chill, which is the direct antecedent of many diseases that are admittedly microbic in origin. We explain this by stating that chill lowers the vital resistance of the organism; but why should it equally stimulate the latent germs to activity? There is, indeed, ample scope, not only for speculation, but for arduous research in the endeavour to harmonise the facts of specific infection with those of apparent spontaneous outbreak of disease. As regards the fact of latency of germs we think there can be no dispute. It is impossible, for instance, to explain the sudden outburst of tuberculous meningitis in a subject who has caseous foci in glands or elsewhere on the theory of reinfection. Long before the bacillus tuberculosis was discovered such outbursts of acute tuberculous infection in those who had such foci in the body were recognised, and were regarded as the chief danger from which it was almost impossible to protect the subject. The cases cited by Dr. FOWLER in respect to pulmonary tuberculosis hardly admit of any other explanation. As to syphilis, the doctrine of latency has long been held, and is, indeed, often the only explanation available to explain the life-long liability to further infection that is associated with

this disease. If, then, the teachings derived from analogy, the experiences of the bacteriological laboratory, and the observed facts of clinical experience, all point to the fact of latency of the germs of disease, the concordance of testimony is too great to be disregarded.

A SPECIAL meeting of the governors of the Chelsea Hospital for Women was held on Wednesday afternoon, Lord GLENESK presiding. The purpose of the meeting was to consider the propriety of the governors dispensing with the services of a member of the honorary medical staff. Under all ordinary circumstances such a proceeding should have been possible to the governors in a manner that would call for no controversy. But the Chelsea Hospital for Women is a luckless institution; for, although the result of the meeting of the governors was to cordially endorse the action of their executive body in the expulsion of the medical officer in question—in which action they were supported, it should be added, by the whole of the medical staff, the impeached officer excepted—yet the outcome of the meeting cannot be considered satisfactory. There are many points remaining which suggest debate of an acrimonious character, and which may possibly receive that unfortunate attention. Therefore we say that the Chelsea Hospital for Women is a luckless institution, for its executive are unable to take a strong and decided action. A trail of ills follows their various departures, and the name of the hospital becomes associated in the public mind with what, for lack of a more dignified word, we must term "rows."

Briefly, the case is as follows, but an account of the meeting is given in another column. Mr. O'CALLAGHAN made changes in the organisation of the hospital. Whether these changes were or were not reforms is no question before us now, but it is our most strongly held opinion that to place any nurse, however capable, in a position of superiority to the resident medical officer of the hospital, will always be in direct contradistinction to the manner in which hospitals should be conducted, and such a course, if uniformly adopted, would end in the ruin of all proper medical administration. Having instituted this "reform" (for Mr. O'CALLAGHAN'S action certainly did place the resident medical officer in a subordinate position to a nurse), a dispute arose between Mr. O'CALLAGHAN and the resident medical officer as to the after-treatment of one of his operation cases. Out of this dispute there arose a dispute between Mr. O'CALLAGHAN and certain members of the staff as to the said operation. The propriety of the operation was unquestioned, and the manner of its execution was not impeached. The dispute was simply whetner what had been done was of the nature that had been suggested in consultation. Mr. O'CALLAGHAN says that it was and Mr. BLAND SUTTON says that it was not. The dispute has obviously arisen out of a sad error, but either side may be right without affecting the merits of the case, for though Mr. O'CALLAGHAN'S colleagues, holding him as the mistaken person, find him impossible to work with, the lay executive of the hospital have clearly stated that they were not acting in response to the wishes of their honorary medical staff in desiring from Mr. O'CALLAGHAN his resignation, but entirely upon their own responsibility. Following on these unfortunate occurrences the board, as we have indicated, called upon Mr. O'CALLAGHAN to resign. He refused. They offered a form of arbitration. For this reason and that reason the proposal came to naught. Finally, on Wednesday afternoon, the board made a motion for Mr. O'CALLAGHAN'S expulsion, which, being endorsed by a general meeting of governors, was carried by 106 to 17.

What was the real point at issue? Not Mr. O'CALLAGHAN'S opinions of the duties of a house-surgeon. Not Mr. O'CALLAGHAN'S accuracy, which has been gravely impugned. The question before the meeting was, Is such a "row" a domestic one, or is it one upon which arbitration from outside should be invited, the executive of the hospital being unable to manage the affairs of the hospital properly? Mr. O'CALLAGHAN was making no categorical defence; he was simply asking for arbitration. We have no hesitation in saying that under ordinary circumstances arbitration would have been unnecessary. Under ordinary circumstances a board of governors would have been the proper people to deal with the situation. But the management of the Chelsea Hospital for Women is not governed by a properly constituted lay board. They are under a stigma. They should never have undertaken the business of the election of their present medical staff. At the time they did so they lay under the censure of an independent tribunal. We refer to the committee of investigation appointed by the hospital authorities to inquire into Dr. PARKES'S statements that he considered that the lay management of the hospital was unsatisfactory. As a result of that report the medical staff of the hospital resigned, and the lay management should have done the same. They were equally to blame then, and they still rest under the shadow of that blame. Now Mr. O'CALLAGHAN has been dismissed by this discredited lay board. A strong board above criticism, backed by its medical officers, should be able to discharge not one, but fifty honorary medical officers. But the lay management of the Chelsea Hospital for Women is not strong, and in undertaking the dismissal of Mr. O'CALLAGHAN without formulating the charges against him, and giving proper reasons for refusing the conditional arbitration for which he prayed, they have made a mistake. On the merits of the case we express no opinion, but as to the value that arbitration would have had as a method of dealing with the case we have no doubt.

ROYAL BRITISH NURSES' ASSOCIATION.—The eighth annual conversazione of the Royal British Nurses' Association was held on Monday, Dec. 7th, in the galleries of the Royal Institute of Painters in Oil Colours, London. Princess Christian, the president of the association, was unavoidably absent, but many distinguished guests attended, among them being Lord and Lady Halsbury, Lady Dimsdale, Lady Dorothy Nevill, Sir T. and Lady Lawrence, the Rev. Sir Borradaile Savory and Lady Savory, Sir J. Crichton Browne, F.R.S., Sir J. Eric Erichsen, Sir Richard Quain, and Sir Dyce and Lady Duckworth. The guests, who numbered some 2000, were received by the vice-chairman of the executive committee, Sir J. Crichton Browne, Mr. T. Pickering Pick, and Miss Thorold, supported by the honorary officers of the association, Mr. Langton, Mr. Fardon, and Mrs. Dacre Craven.

Annotations.

"Ne quid nimis."

THE CASE OF MR. LIONEL SMITH.

WE are sure that all our readers will be glad to see from a letter which appears in another column that some slight redress has been made to Mr. Smith for all the injuries which he has suffered during the past eight years. For a full account of the case we must refer our readers to our issues of Feb. 9th and Aug. 24th; but to recapitulate shortly the facts are these. In 1887 Mr. Smith was acting medical officer at Albany. In the following year a patient in the Albany Colonial Hospital died, and a coroner's jury of three persons attaching blame to Mr. Smith on this account, the Government dismissed him, allowing an appeal to the Secretary of State, who upheld the Governor's decision. Mr. Smith then, having been refused a hearing before the Medical Department in West Australia, entered a petition of right with the Colonial Secretary as defendant. The jury, after one trial in which they disagreed, eventually found for the plaintiff with £200 damages for wrongful dismissal, but on the question of whether he had or had not been wrongfully dismissed they could not agree. In the end the Privy Council ordered judgment to be entered for the Government of Australia. This is a very short and bald statement of a grievous and cruel wrong inflicted by the Government upon an absolutely innocent man. Government took away his livelihood and his character, so that he is left, a middle-aged man with a wife and children, to begin the world over again. It will be seen from the letter in our correspondence columns that Mr. Chamberlain, true to his Bechuana name of "the one who rights things," has offered Mr. Smith the appointment of district surgeon in Zululand, a post he has determined to accept. The salary is very small, but it is something, and in order to be able to take it Mr. Smith requires funds to complete the education of his children and to provide for the passage and outfit of himself, his wife, and his family. He has been fighting his battle nobly and resolutely for eight weary years, and has now come to the end of his resources. We confidently appeal to our readers and through them to their well-to-do patients to send us such a sum as will enable Mr. Smith to face, at any rate, the immediate future without fear. Let everyone consider the woeful position of this man. Judged guilty of a crime which he never committed, maligned, deprived of all opportunities of making a living, looked upon as that much-to-be-pitied but tiresome person "a man with a grievance," with those dearer to him than his life dependent upon him, he is absolutely without means. A chance, thanks to Mr. Chamberlain, offers itself of, at all events, keeping a roof over his head and of getting food, but immediate help is wanted. Christmas is the season of all others for works of charity and mercy, and we are confident that those who have this world's goods will answer our appeal to share them with their brother who is in such sore need. Let them remember that "alms do deliver from death," rather than be placed in the category of those of whom it was said, "When they will not give a doit to relieve a lame beggar they will lay out ten to see a dead Indian." Subscriptions sent to THE LANCET office should be enclosed in an envelope marked, "Lionel Smith Fund."

LONDON WATER-SUPPLY.

THERE was no protracted debate on the question of London's water-supply at the meeting of the County Council last Tuesday. The proposal to ask Parliament to create a water trust for the control of the London water-supply was rejected, and in its stead a motion was carried by a majority of thirteen to ask the Government to place the control of the water-supply in the hands of the London consumers, who are to be directly represented by the Council in conjunction with the City Corporation. A clause is provided for consumers in the metropolitan area outside the county who "shall not be denied or deprived of similar rights in their respective areas." Further, "the purchase price of the existing water undertakings shall not be assessed under the provisions of the Lands Clauses Consolidation Act, but shall be based upon the fair and reasonable value of these undertakings, due regard being had to the rights, special circumstances, and obligations of the companies." Finally, "the Parliamentary Committee shall be instructed to report as to the reply of Her Majesty's Government immediately after the recess." The adoption of this motion will probably wrest a definite pronouncement from the Government as to the precise direction which they propose legislation should take, and their reply will therefore be one of great moment.

PLUMBER'S WORK.

IN view of the great importance in a sanitary respect of the work of plumbing we have been for a considerable time engaged in an inquiry as to the relative efficiency and cost of plumber's work. We have been much struck by the absence of any definite information as to the latter point, and have as far as possible endeavoured to supply the deficiency. Our inquiry is now practically completed, and we propose to publish in the course of a few weeks the results of our Commissioners' investigations. These investigations have been undertaken independently by us, and we are solely responsible for the result. We have thought, however, that their value would be enhanced if the report were submitted to the criticism of experts. The Worshipful Company of Plumbers very courteously and readily fell in with our views, and appointed a committee to consider our report and make suggestions or criticisms thereon. The committee have devoted much time to this work, and we shall have great pleasure in printing their report as an addendum to our own. Their criticisms, whether destructive or the reverse, will be equally welcome.

HORSELESS CARRIAGES AND SANITATION.

So novel as yet is the mere idea of street traffic without the aid of horse power that the minds of most persons can hardly have touched the practical questions involved in such an arrangement. We are not, however, wholly without evidence bearing upon this subject. The ordinary cycle, though but a toy in comparison with many larger and more complicated members of its class, and a variety of automatic wheeled machines which have appeared at times on public view, have added something to our education. The steam and electric tramcar, and even the time-honoured road engine, afford other examples of mechanical energy thus employed. We may therefore claim to know enough of the outlines of the new system of movement to sketch with an approach to accuracy some of the advantages and drawbacks which its adoption must entail. It is needless here to discuss the many economic, æsthetic, and social effects which would follow even the partial disuse of the horse as a draught animal. Another question, that of sanitation, calls for more attention from us. There can be no doubt that, as regards this important matter, the equine mechanism is somewhat lacking. Our stables without the horse would be as pure as our homes if we were ourselves visible only as figures of still life, waxen, or ivory models. The stable-pit filled with the defiled bedding of our obedient and faithful four-legged

servant would be known no more to our senses. The contagia bred in its midst and scattered in the dry dust of summer air, to find their way within our sleeping and sitting rooms, would be only the remembered signs of a past and primitive civilisation. The germs of glanders would not harbour and be hatched, as they still occasionally are, in the stalls of overcrowded mews. Thus far the margin of profit is on the side of him who charges his vehicle with steam or electric energy. Possibly he may still have grounds for anxiety, for accidents will happen, even with machinery. It is hardly to be expected, however, that this generation will witness a triumph of hygiene so marked as is suggested by the above description. The stable and the coach- or cart-house will not soon be dissociated, and the need of stringent sanitary measures on the part of their owners will remain as a pressing and continual obligation. Much remains to be done, and much can be done, in this direction in order to ensure not only the health of stabled animals, but of the human population in or near mews. The frequent and regular removal of refuse is one important means to this end, and by means of the methods, at once effectual and simple, employed for this purpose in well-kept stables the work of cleansing can be carried out with ease and completeness.

THE HOSPITAL ACCOMMODATION OF THE METROPOLITAN ASYLUMS BOARD.

WE have received, through the courtesy of Mr. T. Duncombe Mann, clerk to the Board, a copy of a letter he has addressed to the chairman, Sir E. H. Galsworthy, showing what the Board has done to meet the enormously increased demand on its space since the notification system and the wholesale admission of the public, as distinguished from paupers, to the hospitals. It makes much of what the Board has done in providing in four years five sites, on two of which hospitals have been already built. On three others the buildings have not been completed, and, indeed, on one—the Tooting permanent site—building is not yet begun. The weakest part of Mr. Mann's defence is in not showing why the Board should keep 1000 beds for a handful of small-pox cases while there is such a pressure for the admission of fever patients. We adhere to our view that the whole working of this system of huge hospitals for the admission of great numbers that presumably could be accommodated at home requires immediate and close investigation as to its efficiency and expediency. Unfortunately it is one of those questions which have no party interest, and it is too probable that we shall go on spending millions of money without curtailing the proportions of epidemics.

VITAL STATISTICS IN EGYPT.

THE Egyptians are unquestionably a very prolific people. From an official paper just published we learn that the number of native births registered during the year 1894 was 335,549, while the deaths from all causes came to 192,103 only; the excess of births over deaths amounted consequently to no fewer than 143,446, which, with an estimated population of 8,000,000, represents the enormous increment rate of 1·79 per cent. Under the existing *régime* there is no reason to doubt the accuracy of the vital returns, whatever may have been the case formerly when the military service was so unpopular that parents used every effort to prevent the inscription of their sons' names on the hated lists. Registration, thanks chiefly to the untiring labours of Dr. Engel Bey, is now very fairly carried out all over the country; and, moreover, even though a little of the old leaven should still remain, the effect of uninscribed infants would be to cause a fictitious diminution of the birth-rate. The census of 1882 is generally regarded as incorrect and misleading, because it was hurriedly taken during the height of the Arabi disturbances, but the statistics now supplied tend in some measure towards the rehabilitation of the discredited enumeration. Its details may be, and probably are, often unreliable, but the totals arrived at seem to be approximatively correct. The native population of Egypt up to the Second Cataract, and including the Oases, was put down as 6,469,716, and if we adopt that number as a basis and allow for increase from superiority of births at the 1894 rate, the calculation will be found to work out at about 8,000,000. According to this hypothesis the birth-rate last year was equal to 42 (nearly) per 1000, and the death-rate to 24 per 1000. Before leaving this portion of the subject there is one point to which we desire to draw attention as affording food for thought. In the two principal towns the difference between the birth- and death-rates is startlingly less prominent than it is in the rural districts, which are nevertheless often said to be extremely insanitary. For every 100 births in Cairo and Alexandria there were 86 deaths during the twelvemonth, whereas in the provinces the proportion was as 100 to 54. Turning to the foreign side of the tableau we find that while 2513 "strangers" died in Egypt during the year 1894, the number of births among them was only 1056. It is probable, however, that the latter total does not represent the whole of the exotic progeny, for in a note it is stated that although registration of deaths is now obligatory for all, the declaration of births is still optional for foreigners. Some years ago the idea prevailed in certain quarters that European women were nearly always barren in Egypt. There are, of course, no real grounds for the notion, but should it still be entertained we are here furnished with upwards of a thousand unmistakable proofs of its fallacy. On the other hand, it has been affirmed that the procreative powers are, if anything, enhanced by residence on the banks of the Nile, and all native Egyptians are thoroughly convinced that the muddy water of their river is in this respect infallible. In their own case there would seem to be very little doubt that, at all events, it does not act as a preventive. With regard to vaccination, it is very satisfactory to find that the operation is now efficiently performed throughout the length and breadth of the land. No fewer than 312,188 "vaccinations with success" are recorded, the number of failures being only 3548, or a little over 1 per cent. In 4045 instances revaccination was essayed, for the most part with good results, only 788 cases proving refractory at the second attempt. Since December, 1890, infants of all nationalities have been liable to compulsory vaccination.

ROYAL ACADEMY OF MEDICINE, IRELAND: THE PROPOSED NEW HOSPITAL SCHEME.

A SPECIAL meeting of the Academy was held on Tuesday last to consider the above scheme, Dr. James Little, President, being in the chair. Dr. Duffey, physician to the City of Dublin Hospital, moved a resolution to the effect that, whilst approving of the proposal to provide better accommodation for cases of small-pox and a home for patients recovering from infectious diseases, the proposed scheme for establishing new isolation hospitals for infectious cases was unnecessary and uncalled for. The proposal was seconded by Sir Christopher Nixon, who argued that the treatment of fevers in departments of general hospitals had not been attended with ill results, and he considered the proposal to establish new hospitals unnecessary and calculated to cause great expenditure of the ratepayers' money. Dr. Grimshaw, President of the Royal College of Physicians of Ireland and Registrar-General for Ireland, moved the previous question. In a very long address he pointed out the dangers resulting from treating cases of fever in other than special hospitals, and mentioned cases which had come

under his own observation in which fever had been spread in hospitals from one person to another. He considered that every case of fever was a centre of disease from which it could spread, and urged, therefore, the necessity of isolating patients completely, which could not be done in general hospitals. He had always condemned the treatment of fevers in such hospitals, and his opinion on that subject remained unchanged. Sir Charles Cameron, chief medical officer of health of Dublin, in seconding the amendment, said that if the Academy passed the resolution proposed it would be an indelible stain upon them. Everywhere except in Dublin fever was treated in special hospitals; and was Dublin right and the rest of the world wrong on that subject? The amendment was then submitted and carried by 21 to 12 votes, and as the original resolution could not then be put, the long debate anticipated did not take place. Many members left before the division was taken.

WEATHER AT MENTONE DURING TWENTY-ONE SEASONS.

WE have received from Dr. William Marriott of Mentone an analysis of the weather at that place during twenty-one years, concerning which he writes as follows:—In the choice of a winter and spring climate for an invalid, the number of fine days on which he can go out at these seasons of the year should be taken into serious account. In the following table of the weather at Mentone during twenty-one seasons, it will be seen how great is the preponderance of fine days over cloudy and rainy ones. The latter are counted rainy even if only a slight amount falls, the rest of the day being fine and allowing of walking or driving out, a continuously rainy day throughout, preventing an invalid getting out, being of rare occurrence, probably half a dozen in the season. The observations in 1886–87 were only taken up to Feb. 22nd owing to the earthquake on the following day:—

November to April.

	Fine.	Cloudy.	Rainy.
1874–75	86	59	36
1875–76	102	40	40
1876–77	104	34	43
1877–78	117	14	35
1878–79	93	19	68
1879–80	117	32	33
1880–81	104	30	46
1881–82	138	18	25
1882–83	98	30	53
1883–84	113	27	42
1884–85	119	15	47
1885–86	104	23	54
1886–87	82	4	28
1887–88	113	3	62
1888–89	120	13	48
1889–90	123	12	46
1890–91	117	21	43
1891–92	118	11	53
1892–93	122	14	44
1893–94	127	15	39
1894–95	117	15	49

Thus out of 181 days in the six months there are only from forty to fifty rainy days. Invalids can therefore look forward to 135 fine days, mostly bright and sunny, while in London during the same period they would not amount to twenty.

TREATMENT OF MALIGNANT DISEASE OF THE BREAST.

IN a paper which appears in another column, by Dr. Robert Sanderson, the question is raised as to whether it is right to stop the "clearing out" process at the axilla. Dr. Sanderson very rightly pleads that we must also consider the posterior triangle. It is important to remember that lymphatic glands may be affected by carcinoma either directly or indirectly. The glands which receive lymph directly from the infected area enlarge first, but it is only at a later period that other glands, through which the lymph has afterwards to pass, become involved. In carcinoma of the breast the lymphatic glands which are most frequently affected are those in the axilla, especially the pectoral set lying under the border of the pectoralis minor. Later in the case glands higher up, situated in the posterior triangle, become also involved. It is extremely rare for the glands above the clavicle to be affected directly. In every case of carcinoma of the breast, in order to reduce the chance of recurrence to a minimum, the axilla should be cleared, even if no enlarged glands can be felt. But if there be no evident involvement of the axillary glands, there is practically no chance that the glands in the posterior triangle are affected; so that it is undesirable to subject the patient to the increased risk of this extension of the operation. But if the axillary glands are markedly involved there is very great probability that the glands above the clavicle are also affected; in such a case there is no reasonable chance of cure unless these glands also are removed. The superficial glands lying on the cervical fascia can be readily taken away, but it is no easy matter to remove the deeper glands which lie around the subclavian vessels and under cover of the clavicle, and these deeper glands are those most likely to be affected. Yet it is undoubtedly advisable to attempt their removal in many cases where they are now left untouched. But the axillary and the supra-clavicular glands are not the only lymphatic glands connected with the breast; the lymphatics of the inner segment of the breast run to the sternal glands in the anterior mediastinum, and it is greatly owing to the fact that carcinoma of the breast usually affects the upper and outer segment of the breast that these intra-thoracic glands are so rarely involved.

LETTER-BLINDNESS.

THE case of word-blindness recorded by Dr. Hinshelwood, which will be found on another page, with the appended comments on visual memory, is of very considerable interest, and an additional form of visual defect must be accepted in which, as in a few other recorded cases, there is not only word-blindness, or loss of memory of the signification of the words of a sentence, but a failure to recognise the individual letters of which words are composed. In this instance the precision of the limits of the cerebral lesion was so exact that Arabic figures were read with perfect ease though the patient was unable to name a single English or Gothic letter. The defect proving persistent the patient, a man aged fifty-eight years, was recommended by Dr. Hinshelwood to begin to learn his letters like a child, and after some months of painful application he recovered the power of naming them. A somewhat similar condition has been observed in patients possessing a knowledge of music, the defect consisting in a loss of the power of musical expression, which has been named "amusia," in one form of which analogous to the above-mentioned case there is a loss of the power of comprehending the significance of musical notes though they can be perfectly seen. In Dr. Hinshelwood's case there was complete loss of vision in the inner part of the right and the outer part of the left retina, or right lateral homonymous hemianopsia. The chief interest of such cases as this, and of others that Dr. Hinshelwood has collected, consists in their bearing on the recondite subject of memory. It has been generally regarded as a special and distinct faculty holding good for all sorts and kinds of knowledge. Sir William Hamilton and Dugald Stewart were at one in regarding it, in the words of Stewart, as that faculty which enables us to treasure up and preserve for future use the knowledge we acquire. That a person has a good memory is in common parlance equivalent to saying he can recall any past impression on his senses; but it is obvious that this is incorrect, and that whilst there is no such single faculty as memory, memories of different kinds of impressions—as of vision, hearing, and movements—do exist, each

of which, as pathology teaches, has its own special cortical area in the brain. An intimate connexion exists between the several centres, but any one may be lost from some local lesion, whilst the others remain intact and in full functional activity. Moreover, some of these centres, as those for speech and writing, as well as the seats of the visual memory of numbers and musical notes, are probably unilateral whilst such visual memories as those of objects, places, form and colour are, as Dr. Hinshelwood observes, efficiently imprinted and stored up in the higher visual centres of both hemispheres. Therefore it would require a bilateral lesion to produce object blindness, hence its much less frequent occurrence. We must refer our readers to Dr. Hinshelwood's instructive paper for the reasons that led him in this case to believe the lesion to have been unilateral.

MEDICAL CERTIFICATES FOR THE LONDON BOARD SCHOOLS.

WE must offer our thanks to our contemporary the *Times* for the excellent leading article of Dec. 13th concerning the School Board and medical certificates. It is all very well for Mr. Sharp to say no slight is intended to be put upon the medical profession, but the fact remains that he has put a slight upon it in general, and in particular by refusing to consult the medical officer of the Board. If the remarks in the whole of the medical press, the leading article and correspondence in the *Times*, the caustic little dialogue in this week's *Punch*, and the refusal of sundry hospitals to give any more certificates do not overcome the pigheaded obstinacy of Mr. Sharp's committee and the Board as a whole, and lead to a rescinding of the resolution of May 30th, further steps will have to be taken. The Board makes a great point of Bible instruction. We would remind it of a notable question, "Who made thee a judge and a ruler over us?"

THE METROPOLITAN POLICE SURGEONS' ASSOCIATION.

THE eighth annual dinner of this association was held on Wednesday evening, the 18th inst., at the Criterion Restaurant. In consequence of the inability of the chief surgeon of the metropolitan police to preside, the late chief surgeon, Mr. Timothy Holmes, acted as chairman. On the conclusion of the dinner the Chairman proposed the usual loyal toasts, and then the "Navy, Army, and Auxiliary Forces," coupled with the name of Lord St. Vincent, who, in the course of his speech, referred to the successes of the Medical Staff in Burmah and at Chitral. The Chairman then proposed "The Metropolitan Police Surgeons' Association." After he had commenced, the unexpected arrival of the chief surgeon, Mr. Mackellar, was announced, and his appearance was the sequel for much cheering and hearty congratulations on recovery from his recent illness. Mr. Mackellar was requested to reply, and did so in his usual eloquent manner, his name being received with musical honours. Mr. Farr also replied, giving a history of the formation of the Association. In the absence of the Commissioners of Police, to whose kind assistance in the interests of the Association reference was made by the Chairman, the "Health of the Chief Surgeon" was proposed, and acknowledged by Mr. Mackellar. Dr. Phillips, in proposing the "Guests," made allusion to the happy relations existing between the divisional surgeons of police and the metropolitan magistrates. Mr. Newton, the magistrate of Marylebone Police-court, replied. Mr. Spurgin proposed the health of the Chairman, who, in reply, reviewed some of the events which affected police surgeons during his tenure of the office of chief surgeon. "The Medical Press" was proposed by Dr. Yarrow, and Mr. W. H. Battle, who replied, alluded to the interest which was [taken by the medical press in all matters of public importance brought forward by the Association. He also expressed the especial interest which the Editors of THE LANCET took in supporting the views of such an important Association. "The Dinner Committee," proposed by the Chairman, was replied to by Mr. Spurgin, one of the secretaries of the Association, who may be congratulated on the success of a very pleasant gathering. During the evening a programme of music was provided under the direction of Mr. Herbert Schartau, assisted by Mr. John Bartlett, Mr. Wingrove Ives, and Mr. F. Russel, a ventriloquist who is well known for his clever sketches.

CONDITION OF THE BLOOD IN PURPURA.

IN the *Presse Médicale*[1] is an essay on Purpura Hæmorrhagica by Professor Hayem in which the condition of the blood in this disease is recorded, and describing investigations made by him. Professor Hayem states that in this variety of purpura the blood possesses the following characteristics. 1. There are no appreciable anatomical modifications in the red corpuscles, except, perhaps, a diminution or absence of those corpuscles of exudation which are produced by the disintegration of the red cells when preparations of blood are submitted to the action of solvents. 2. There is a considerable diminution in the number of hæmatoblasts; those that remain are often considerably increased in size. 3. There is no constant alteration in the number of leucocytes. In one case only was the number of white cells increased. 4. The coaguability of the blood was normal. The fibrous reticulum remained invisible, although, on the other hand, it was formed of fibres of an unusually large size. 5. Transudation of serum was absent from the clot, which latter possessed only a feeble power of contraction. Thus, the two characteristic and constant pathogenic properties of the blood appeared to be the scarcity of hæmatoblasts and the absence of transudation of serum after coagulation. The diminution of the hæmatoblasts in purpura would partially explain the production of hæmorrhages (epistaxis, menorrhagia, &c.), as these bodies play an important *rôle* in the arrest of bleeding and the clotting of the blood. It is probable that in certain diseases attended with purpura the diminution in the number of hæmatoblasts is in consequence of a destruction of these elements. It is possible that the state of the blood may be dependent upon a faulty elaboration of nutrient material, or upon the introduction into the blood, under the influence of digestive disorders, of toxic substances having the property of producing changes in the hæmatoblasts.

PROSECUTIONS FOR SELLING DRUGS OVER THE PRESCRIBED STRENGTH.

THE law is clear in regard to the sale of drugs, but not so easily interpreted is it in regard to food, although both, of course, come under the provisions of one Act. In the former case the requirements of the Pharmacopœia are to be complied with, but in the latter no rules are laid down as to what should be the standard quality of the various articles of food. Drugs are required to be sold containing neither a deficiency nor an excess of the active ingredient, but the precise quantity; foods are not to be attenuated, or, in other words, the seller is not to practise a fraud upon the purchaser, nor is he to offer for sale any article for consumption containing ingredients that are injurious to health. The pharmacist, therefore, commits just as serious a breach of the law if he supplies drugs which are of greater strength than is asked for, or in excess of the strength prescribed by the Pharmacopœia. (Parenthetically, imagine a London milkman found guilty of

[1] 1895, p. 233.

selling milk containing an unusual proportion—say 20 per cent.—of cream!) Four cases of this kind occurred recently at Birmingham. In two of the cases tincture of iodine was sold containing 150 per cent. of iodine and 50 per cent. of potassic iodide in excess of the quantities set forth by the British Pharmacopœia; in the other two cases samples purporting to be tincture of aloes contained 40 per cent. of solid ingredients and 50 per cent. spirit in excess of the formula. With the exception of one case—viz., that of aloes, in which it appeared the inspector purchasing the samples had entered it as "compound tincture"—fines were inflicted and costs imposed. It is not probable in these particular instances that any harm would have resulted despite the great excess of ingredients found on analysis by Dr. Alfred Hill, the medical officer of health; but if the same laxity had been extended to other drugs the results might obviously have been very serious indeed. The majority of these offences are probably committed when a purchaser buys drugs on his own responsibility, and not when he is under the direction of a medical adviser. On the whole the record of offences of this sort, on the part at any rate of respectable chemists and druggists, is a very satisfactory one; theirs is a business which requires constant care, and no one better than themselves know it and realise it. Still, the cases which do occur from time to time should not escape the notice of the medical profession, who should, therefore, keep a constant watch and some sort of check on the medicines which druggists make up for them.

A CASE OF TRICHINOSIS.

A CASE of trichinosis is reported by Dr. Edgar Garceau of Boston in the *Boston Medical and Surgical Journal* of Nov. 21st of this year. Apart from the rarity of the disease the case presents several points of interest. The patient was a German thirty years of age. About the end of March he ate some smoked ham. Many of his friends who also ate some of the same ham were taken violently ill the day after with severe vomiting and purging, but they all eventually recovered. He himself was not taken ill at once, which fact he thought was accounted for because he ate only a very small piece. For two weeks, however, he felt ill, complaining chiefly of backache and pain in the limbs. When seen on April 12th the muscles of the calves of his legs and of the arms and back were sore. The bowels had been regular, and there had been no symptoms of intestinal irritation. On examination a few red spots were seen on the abdomen, which disappeared on pressure. The spleen was of normal size. The temperature was 103·5° F. The face was red, the eyes bulging in the sockets, and the conjunctivæ red and swollen and raised above the level of the corneæ. The next day he was worse, and he passed three very loose stools, watery, and of pea-soup consistency. The following day there was vomiting, the temperature was 104°, and the voice husky. He gradually grew weaker and died on April 17th. Only a partial necropsy was allowed, but no difficulty was experienced in demonstrating the characteristic trichinæ. At the early stage of the case the diagnosis and the resemblance to enteric fever was remarkable. The prodromata of malaise, backache, and pain in the limbs, the gradually rising temperature, the characteristic typhoid stools, and the rose-coloured spots all suggested enteric fever as the probable diagnosis. The pains in the limbs, however, became so severe that morphia had to be administered for their relief, and then the diagnosis of trichinosis was more assured. We have, therefore, the history of the case and the period of incubation (two weeks) during which time the trichinæ were migrating from the intestines to the muscles. If the patient had eaten a good deal of the ham it is probable that he would have escaped, as the others did, by the violent vomiting and purging. Dr. Garceau suggests that a cathartic should be given in future doubtful cases to clear out the parasites. In this patient's case all the trichinæ swallowed had a chance to propagate, and the number so propagated may be inferred when it is said that a single female trichina may produce more than a thousand embryos. The ocular symptoms were suggestive; the œdema of the conjunctivæ was very marked, and was the first symptom which aroused suspicion as to the nature of the case. The implication of the laryngeal muscles, as evidenced by the husky voice, was also characteristic.

THE "SUN" AND CHARGES AGAINST A MEDICAL MAN.

ON Thursday, Dec. 12th, the case of Ady *v.* Cadett came before Mr. Vaughan. Mr. Cadett is a journalist, who, it was alleged, had published a defamatory libel in the columns of the *Sun* upon one J. C. Ady, a medical man. Mr. Ady having been cross-examined, Mr. Vaughan stopped the case and dismissed the summons. As we believe further proceedings are pending we refrain from any comment.

MUSCULAR ATROPHY AND GENERAL PARALYSIS.

IN a recent number of the *Münchener Medicinische Wochenschrift* Dr. Riebeth publishes a case of which an abstract appears in the *Neurologisches Centralblatt*. The patient had gonorrhœa in 1884, but had not apparently had syphilis. His nervous symptoms began in 1893, and consisted of weakness, giddiness, noises in the ears, and inability to work. There were also considerable excitability occasionally verging on violence, an indifferent manner and emotional tendency. He was found to have unequal pupils, loss of reaction to light, absent knee-jerk, articulatory disturbance, and impairment of intelligence. After his discharge there were increase in his psychical symptoms, diminution in his appreciation of pain, and other disturbances of sensibility. In March, 1894, the triceps and trapezius on each side were found to be wasted, and this wasting gradually increased, so that at the end of May, 1894, there was much atrophy of the right trapezius and latissimus dorsi, and of the pectorals and triceps on both sides. There was slighter atrophy of the left trapezius and of the serratus, rhomboid, deltoid, and infra-spinatus on the right side; while in the left latissimus, the flexors of both forearms, the rotators of the upper arm on the right side, the right supra-spinatus, and the abdominal muscles the atrophy was very slight, but distinct. In these muscles there was diminished response both to faradaism and voltaism. It is evident that in this case there was first affection of the posterior columns with a disturbed cerebral state, while the condition underlying the muscular atrophy developed later. The condition somewhat resembled that in the juvenile form of muscular dystrophy, but here the muscular atrophy probably depended upon changes in the spinal cord.

HUNTINGTON'S AND CONGENITAL CHOREA.

AT the recent meeting of the Vienna *Verein fur Psychiatrie und Neurologie*[1] Dr. von Sölder showed a case of Huntington's chorea. The patient was a woman fifty-two years of age who became affected with chorea seven years previously, but her intelligence was still good. The eye muscles, contrary to the usual rule, took part in the contractions. Speech was much interfered with, and there was but little voluntary control of the choreic movements. These, however, ceased during sleep. There was considerable muscular weakness, and the reflexes were distinctly increased. The patient was the granddaughter of a woman who became choreic at the age of fifty and died in her fifty-third year. Of her seven sons, all (including the father of

[1] Neurologisches Centralblatt, 1895, p. 1149.

the patient shown), except the eldest, suffered from chorea about the fiftieth year. The patient had four sisters, and of these one suffered from chorea at the age of forty-nine, while two others were mentally affected. A son of the patient was healthy. Another case was also shown, one of so-called "chronic congenital chorea" in a girl aged sixteen. The contractions were noticed immediately after birth, and the patient did not begin to walk until she was four years old, and it was only at the age of eight that she could walk alone. She was also late in speaking. She used her hands with difficulty, but her condition showed a slow but gradual improvement. Voluntary movement increased the contractions. The knee-jerk was slightly increased, but with the exception of a small degree of weak-mindedness the general condition was fairly good. The case, according to Dr. von Sölder, is really one of cerebral diplegia, and, as was recently pointed out in our columns, this is almost invariably the actual condition in cases of so-called congenital chorea; so that the term is probably a misnomer, and the movements would be more correctly described as those of athetosis.

DR. RENTOUL explains in a circular that his opposition to five successive Bills since 1890 has cost him, "out of his own private means," £321 15*s.* 9*d.* Dr. Hugh Woods established a fund to repay Dr. Rentoul, and succeeded to the amount of £50. Mr. Colin Campbell succeeded in the same way to the amount of £30. In 1894 the branch committee of the Lancashire and Cheshire Branch refunded him £37 17*s.* 2½*d.* These sums amount in all to £117 13*s.* 2½*d.*, leaving him still £204 2*s.* 6*d.* out of pocket.

THE death, on the 17th inst., is announced of Mr. Daniel Ambrose, M.D., Q.U.I., L.R.C.S.I., &c. Dr. Ambrose was member of Parliament for South Louth. He belonged to the anti-Parnellite party, and at the last General Election defeated another medical man, Mr. J. G. Fitzgerald.

WE regret to hear of the death of Dr. Fauvel, of Paris, whose reputation as a laryngologist is of world-wide fame. His work on Tumours of the Larynx is one of the standard works on the subject.

THE ASHANTI EXPEDITION.

VERY great activity has been displayed on the Gold Coast in disembarking stores and in preparing for the advance of the troops on Kumasi. One of the main difficulties in the present expedition, as on the last occasion, has been the transport. There is no animal or vehicular transport in the country, and everything has to be carried by native bearers. Great care has been taken in providing and organising a sufficient force of these, and the transport work went on very satisfactorily as far as Mansu, but owing to the difficulty in procuring food in the country beyond, and the desertion of a number of the native carriers, a block occurred from the accumulation of stores at that station. This will, however, soon be overcome. As in our Indian warfare, and following the course adopted in the last Ashanti campaign, rest camps have been provided along the line of route. Eight of these have been constructed, and a field telegraph will be completed between Cape Coast Castle, which is the base, and Prahsu. The postal service which has been organised between these stations is working well. The distance, it may be mentioned, of Prahsu from the base is about eighty miles. A pontoon bridge is being constructed over the Prah, but the work is temporarily delayed pending the arrival of requisite materials, and cannot be completed for many days. Three canoes, each capable of carrying thirty men, have been constructed for the passage of the river.

Meanwhile a hospital for the troops is being provided at Connor's Hill, which will afford accommodation for five officers and seventy-five men, and a bearer company of 600 men has been organised for the transport of the sick. We are not told, by the way, what the means of transport of the sick and wounded will be, whether stretchers or canvas cots or hammocks from the naval ships, or all of these. Surgeon-Captain Eckersley has started to provide for the establishment of a hospital, at Prahsu for the troops on the march. In addition to the land hospitals at the base there will, of course, be the large amount of accommodation afforded by the floating hospital, the *Coromandel*, which has been specially fitted up for the purpose; and with the steam transports and other communications between the Gold Coast and this country there should be no difficulty in arranging for the transit of invalids.

Whilst preparations are being made for the advance of the force along the line of route from Cape Coast Castle across the Prah to Kumasi, a movement is also to be made contemporaneously with that of the expeditionary force from the coast, from the north, by a large force of constabulary and a detachment of Houssas and two Maxim guns. This latter force will, it is understood, proceed to the Nkoranza country, and thence threaten, and advance if necessary, on the Ashanti capital.

The subordinate chiefs in the interior of the colony are understood to be very favourable to the expedition, and have proffered their services and large detachments of bearers. Samory, the Mahommedan chief of a large warlike tribe in the vicinity of Ashanti, who has a powerful army, is understood to be also favourable to the British enterprise.

The belief entertained on the Gold Coast is that the chiefs of the Ashantis are determined on fighting. It is rumoured that Prempeh will be deposed and replaced by his mother, a woman of fortitude and masculine character, who is strongly inimical to the whites. Be this as it may, the expedition may have to encounter some unforeseen difficulties and hard fighting before the troops succeed in capturing the Ashanti capital. The topographical difficulties and dense bush for obvious reasons offer very favourable conditions for Ashanti warfare. The country is well adapted for raids and surprises and sudden attacks from numerous small and concealed bodies of men.

The health of the troops on the Gold Coast is reported to be excellent. The present season is favourable in this respect for the expedition, which cannot, however, it is believed, start for Kumasi for some time. We hope that when it does start the march to the Prah may not be protracted by any defective arrangements or other obstacles, for the country and bush are very malarious, and that when the expedition has accomplished its work by penetrating to the capital and securing its political objects the force may effect its return march before the rains set in. In that case there is no reason to suppose that the risks to health and life should prove greater than on the occasion of our last war with Ashanti. Everything depends upon the exercise of forethought in providing for the requirements of the force and in safeguarding their health, as far as practicable, by good sanitary arrangements. The previous experience of those who have to conduct the arrangements in these respects affords the best guarantee that we can have of their being properly carried out.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AN ordinary meeting of the Council was held on the 12th inst., the President, Mr. Christopher Heath, being in the chair.

A further report dated Nov. 15th was presented from the Board of Examiners in Dental Surgery. The chief recommendation was that an examination in mechanical dentistry, chemistry, physics, and metallurgy should form the first examination for the licence. The report was referred to a committee of the Council.

Dr. Arthur P. Luff was appointed an Examiner for Part I. of the Examination in Public Health.

Two cases of alleged misconduct on the part of Members were considered.

The President stated that the Deputation Committee, at a meeting held on the 2nd inst., had determined to further postpone their report to the Council, as one of the subjects referred to their consideration had been selected by the

Council for reference to the meeting of Fellows to be held on Jan. 2nd, 1896.

The President, on behalf of himself and the Vice-Presidents, reported the delivery of the Bradshaw Lecture, on the 5th inst., by Mr. N. C. Macnamara, the subject of the lecture being, "Infective and Tubercular Osteitis as Causes of Arthritis in Childhood and the Importance of Early Treatment." The best thanks of the Council were accorded to Mr. Macnamara for his lecture, and he was requested to publish it.

A letter of the 22nd ult. from Mr. Frank Marshall, honorary secretary of the Newcastle-on-Tyne Dental Hospital, applying for the recognition of that institution by the College for the purposes of teaching, was referred to the Board of Examiners in Dental Surgery.

A letter was read, dated the 20th ult., from Mrs. E. Garrett Anderson acknowledging the receipt of the letter informing her of the reply of the Council to the memorial from the London School of Medicine for Women, and expressing the belief that the memorialists, while much regretting the decision, will greatly value the assurance contained in the resolution of the Council that, had the matter rested solely with them, the prayer of the memorialists would have been granted.

A letter was read, dated the 27th ult., from Dr. Liveing reporting the adoption by the Royal College of Physicians of London, on the 22nd ult., of the report, dated Nov. 11th, 1895, of the delegates on the arrangements of the examinations under the five years' curriculum, with the following rider—viz: "That the College of Surgeons be informed that this College would consider it an improvement if pharmacology were placed with therapeutics under the head of medicine, instead of being accorded a distinct position as a subject separate from medicine, surgery, and midwifery." The Council thereupon expressed their approval of the suggested alteration.

A letter was read from Mr. Thomas Bryant reporting the proceedings of the General Medical Council at their late session. The letter was received, and the best thanks of the Council were given to Mr. Bryant for his services as representative of the College.

THE BATTLE OF THE CLUBS.—XIV.

WE have received a copy of the "Rules, Code of Etiquette, &c., of the Fermanagh Medico-Ethical Association." The objects of the Association are as follow:—

The promotion of social and professional intercourse, of mutual protection and co-operation, of opportunities to enable members to obtain the advice and united support of the local profession.

To obtain increased and more efficient representation for general practitioners on the General Medical Council, and of medical men in Parliament.

To arbitrate in disputes between members of the Association.

To support and protect the honour and dignity of the profession, and to promote honourable practice, to suppress advertising, or other unfair methods of competition, unqualified and irregular practitioners.

To watch Parliamentary proceedings affecting the profession and give the members the opportunity of expressing their views thereon.

To consider and take action upon the relations of medical officers with all forms of club practice, and with regard to Poor-law and other official appointments.

To circulate a Code of Ethics and information as to various scales of medical tariff amongst the members.

To promote the improvement of medical fees, and the adoption of some "wage" or "valuation" limit for those entitled to free attendance from Poor-law medical officers.

To establish, maintain, and circulate amongst the members a patients' black list.

WITH REGARD TO CLUB PRACTICE.

To enforce a wage limit.

To insist on a medical examination for all new members and an examining fee.

To raise the usual rate of subscription for females and juveniles.

To safeguard the tenure of office by a three months' notice on either side.

The code of medical etiquette set out by the Association is, with some additions, that adopted by the Manchester Medico-Ethical Association. It contains directions for nearly every conceivable point that can possibly arise in the relation of practitioners to patients or to one another. A very full and carefully drawn-up table of fees is given. With regard to the question of club practice the Fermanagh Medico-Ethical Association does not seem to have made up its mind. Appended to the rules and code are the rules adopted for club practice in Cork, and those drawn up by the Eastbourne Provident Medical Society, of which latter a full account appeared in THE LANCET of Oct. 5th, 1895. In the matter of Cork, the Fermanagh Medico-Ethical Association consider that the wage limit—£200 a year—is too high, and that the practice of charging for a family irrespectively of numbers is not nearly so desirable a practice as charging for each member of a family. In these two opinions we cordially agree. For a man with an income of £200 a year to belong to a club is absurd, or would be in England; but the question of medical attendance in Ireland stands upon a somewhat different footing. In our opinion, the club difficulty is best solved by the formation of provident medical associations like those at Eastbourne and Bexhill, and the Portsmouth Medical Union.

CHELSEA HOSPITAL FOR WOMEN.

THE CASE OF MR. O'CALLAGHAN.

ON Wednesday afternoon a special meeting of the governors of the Chelsea Hospital for Women was held in the board-room at the hospital, under the chairmanship of Lord Glenesk. The purpose of the meeting was "to consider the propriety of the governors dispensing with the services of a member of the honorary medical staff, and to pass a resolution thereon." There was a fair attendance.

At the opening of the proceedings, Mr. O'CALLAGHAN asked if Mr. Charles Russell, his solicitor, who was helping him in the case, might be allowed to speak for him. This was not granted at first, but Mr. BURDETT-COUTTS, M.P., appealed to the council in the interests of fair play. He said that the case of Mr. O'Callaghan should be fully and fairly stated before the governors proceeded to a decision on the subject.

The CHAIRMAN said that this need not be made a formal matter of motion. Mr. Russell had no real *locus standi*, but as there was a disposition on the part of some of the governors it would be advisable to admit him, and he would take it upon himself to do so.

Mr. RUSSELL was then admitted into the room.

The CHAIRMAN said that the council had considered themselves obliged to summon this meeting to decide upon the council's conduct in a matter affecting the hospital. Rumours had got abroad about the hospital, as if some scandal had occurred in it connected with the patients and with matters of that kind. That was not the case. He had only to repeat the strong terms of praise he used when they last met regarding all responsible for the carrying on of the hospital, including of course Mr. O'Callaghan, of whose skill no one had ever had the slightest doubt. Mr. O'Callaghan had circulated a pamphlet in which he represented himself quite unfairly as a victim, not because of professional jealousy but because he was a reformer, and that he was meeting the usual fate of reformers—martyrdom. His reform consisted of interfering with the general law of the hospital by forbidding the resident medical officer to interfere with his (Mr. O'Callaghan's) patient. It was a question of hospital discipline, not of Mr. O'Callaghan's efficiency at all. Mr. O'Callaghan had found fault with the resident medical officer for touching the dressings of a patient. That was a medical question upon which only medical authorities could determine; but immediately after this the council found that the case had not been entered up in the books; that the woman had died on June 18th; and that on the 26th, when the weekly board meeting was held, there was no notice of the death, and the case was not written up. There again they thought Mr. O'Callaghan had been in default. Mr. O'Callaghan virtually attributed the death to the resident medical officer—to a secondary shock received from his treatment. That was a serious allegation; and the council found, upon further inquiry, that Mr. O'Callaghan had invited Mr. Bland Sutton and Dr. Duncan to state their opinion in a way that both gentlemen considered a violation of medical etiquette. It had been his (Lord Glenesk's) painful duty to inform Mr. O'Callaghan that he had lost the confidence of the board, and it had been thought he would at once resign. Mr. O'Callaghan did not take that course, but called for further investigation, and Mr. Burdett-Coutts made his appearance on the field of battle and suggested a *modus vivendi*, to which they were all most ready to listen. But the whole medical staff then intimated that they

could not possibly work with Mr. O'Callaghan. In all this matter he would point out that the council had been pretty nearly unanimous throughout; and they were certainly unanimous now, and the medical staff were also unanimous. Before the medical staff made that intimation the council had already asked Mr. O'Callaghan to resign; and therefore the council were not, as some people had said, dictated to by the medical staff at all. The death of the patient Sarah Welman was in no way regarded as accountable to the action of the resident medical officer. On the other hand, the staff considered that he would have been neglectful of his duty if he had acted otherwise than as he did. Mr. Burdett-Coutts and Mr. Dyer Edwards interviewed the medical staff, hoping to find some way out of the matter without calling for the resignation; but the staff replied that they were unable to assent to the suggestion of withdrawal and apology. Upon that the council resolved—Mr. Burdett-Coutts withdrawing and two other gentlemen not quite agreeing—not to rescind the motion calling for Mr. O'Callaghan's resignation. Messrs. Day, Russell, and Co. wrote on behalf of Mr. O'Callaghan that he would not resign, and the council replied that they would have to refer the matter to the governors, and that word "refer" had been twisted into meaning an arbitration. That was never intended. The council were the executive, doing the work for the hospital as well as they could, but they were never going to submit to an arbitration before lawyers. They were willing to refer the matter to two gentlemen as consultants, one to be nominated by the President of the Royal College of Physicians and the other by the President of the Royal College of Surgeons. He then narrated the circumstances which led to his (Lord Glenesk) having seen at the hospital two gentlemen nominated by the Royal Colleges of Physicians of London and Surgeons of England to assist as consultants in the matter, and read correspondence from Messrs. Day, Russell, and Co. showing how and why the help of these gentlemen had not been used. The council had never intended to offer an arbitration before which Mr. O'Callaghan could appear with distinguished leaders of the Bar, and they ultimately took the advice of Mr. Cozens Hardy, Q.C., as to their legal rights. Lord Glenesk concluded his speech by saying that the council, after eighteen meetings, and after carefully weighing everything, had come to the conclusion, very reluctantly but entirely based upon the internal regulation of the hospital, that whether Mr. O'Callaghan lost his head or whatever else was the matter with him, he could not get on with his colleagues, and so they wished him to depart from Chelsea Hospital. If this meeting decided that the executive and the honorary staff were in the wrong they would be asked to appoint another board and another staff, though both would willingly continue their services until their successors were appointed; but this meeting would either endorse their conduct towards Mr. O'Callaghan or prefer to dispense with their service.

Mr. RUSSELL, Mr. O'Callaghan's solicitor, was then heard. He said that Mr. O'Callaghan was there that day charged with some terrible things. He (Mr. Russell) had nothing to complain of in the way the chairman had put the case according to the chairman's view of it. They no doubt desired to be fair; but he thought the council had acted in the most unfair way in threatening resignation should this meeting not support them. The meeting had been told that Mr. O'Callaghan had made false charges against colleagues, that he had tried to suborn them to falsify the books. Yet the chairman said that there was nothing to arbitrate upon. After taking upon himself the responsibility for Mr. O'Callaghan not appearing before Dr. Black and Mr. Bryant, Mr. Russell said he thought the history of the dispute had been given correctly, fairly, good-temperedly, and politely in the pamphlet which had been circulated. Mr. O'Callaghan had desired to introduce a particular reform into the hospital, and the chairman said he should have gone to the board to ask authority to do it. But that missed the whole point of the case, because there were rules by which the doctor in charge of each ward was given power, as he contended, to introduce such changes. He knew there was a difference of opinion about it, but when Mr. O'Callaghan issued the order that the resident medical surgeon was not to interfere with his patient he did it in the belief that he was well within his rights. The patient was admitted on May 30th. Shortly afterwards there was a consultation about which there was now a dispute. On the one side, Mr. Bland Sutton stated that a particular operation was advised. On the other side, Mr. O'Callaghan said that a totally different operation was advised. The operation book was not written up until the woman was dead and buried. It was then brought to Mr. O'Callaghan to sign, and immediately, when it was called to his attention, Mr. O'Callaghan said he did not notice that Mr. Sutton had signed for a different operation, and he did what a man of honour would do, and the next time he met Mr. Sutton he told him that he had made a mistake and signed for the wrong thing. Mr. Sutton said, "Do you mean to say that I am a liar?" and to that rather "tread on the tail of my coat" remark Mr. O'Callaghan said, "Well, if you put it that way, you are." But did that mean that Mr. O'Callaghan tried to suborn a colleague to falsify a book? Mr. O'Callaghan now apologised heartily and sincerely for the language he used. But the charges were serious, and some impartial outsider should be asked to hear and decide upon them, which he thought was the original intention, and which would have been carried out but for the unhappy incident of the arbitrators named going and seeing a member of the board without a representative on the other side. A first impression upon an arbitrator was most important.

The CHAIRMAN said the reference had nothing to do with the council. It was simply a reference of the charges made by Mr. O'Callaghan against the resident medical officer.

Mr. RUSSELL said that the question had been raised whether Mr. O'Callaghan had the right to establish a particular rule, and so the conncil would also have been concerned. Lord Glenesk was incapable of doing an unfair action consciously; but surely where the honour and the future of a medical man of good repute were concerned, it was the commonest justice that they should put definitely in black and white the charges made against him. That was what he asked them to do, and to refer the charges to fair arbitration.

Dr. DUNCAN, senior medical officer at the hospital, asked if Mr. O'Callaghan had written or endorsed the contents of the pamphlet which had been circulated.

Mr. O'CALLAGHAN: Certainly.

Dr. DUNCAN said that the pamphlet was teeming with inaccuracies, and he went on to give extracts and to contradict them. It mentioned that the Samaritan Hospital had not a resident medical officer. He (Dr. Duncan) had it on the authority of one of the staff of that hospital that, although it did not keep a resident medical officer now, it used to do so, and the officer was dispensed with owing to circumstances totally unconnected with the treatment of patients. Moreover, all the staff lived in the vicinity of the hospital; but Mr. O'Callaghan and himself lived three miles away from the Chelsea Hospital for Women, and a patient might easily bleed to death before they could arrive. The medical staff came to the unanimous conclusion that the death of the patient in this case was in no way contributed to by the action of the resident medical officer. It was entirely false to say that the action of the medical staff forced the council to call for Mr. O'Callaghan's resignation.

Mr. BLAND SUTTON then gave his version of the incident of the signing of the operation book. He had signed it, leaving the line above his for Mr. O'Callaghan to enter his statement about it. Ten minutes before going before the committee, he met Mr. O'Callaghan, who, without discussing the case, said, "Look here, my boy, there is a way out of this difficulty for you." He replied that there was no difficulty for him. Mr. O'Callaghan said, "Tell the council you made a mistake, that your entry referred to a case in another ward," and he replied that he had had no other case, and asked, "Do you mean to say I deliberately wrote a lie in the book," and Mr. O'Callaghan said, "Yes, and I will tell the board so." He then said he would never speak to Mr. O'Callaghan again.

Mr. BURDETT-COUTTS read his letter of resignation as a member and Vice-chairman of the Council, stating that his reasons were that the Council first called upon Mr. O'Callaghan to resign upon the strength of an *ex-parte* statement, and that although it was afterwards much shaken by evidence adduced by Mr. O'Callaghan, the Council refused to rescind the resolution. In taking this latter decision the Council appeared to have accepted a second *ex parte* statement from the medical staff, which was not only injurious to Mr. O'Callaghan, but an attempt to dictate to the Council whether they should or should not retain a particular officer in the hospital. He considered that the whole matter should be referred to arbitration.

The CHAIRMAN said that Mr. Burdett-Coutts had only

been present at two out of the eighteen meetings at which this matter had been considered. His late colleagues were now unanimous.

Mr. FERGUSON said that there was nothing to arbitrate upon.

Mr. J. L. LANGMAN said that Mr. O'Callaghan had been blamed for not attending before the arbitrators; but Mr. O'Callaghan had been told that no action would be taken for two months, and so had made his arrangements to go away. He moved: "That the whole of the questions that have arisen in this matter be referred to arbitration."

Mr. O'CALLAGHAN said he wished to say a few words in reply to some of the remarks which had been made. Mr. Sutton, during the week in question, saw two cases with him of the same nature, and he (Mr. O'Callaghan) said that Mr. Sutton had mixed up the two, and when asked to sign the book on the second case he forgot. He (Mr. O'Callaghan) knew it was a mistake only—but it was Mr. Sutton's mistake. He was prepared to prove this before the arbitrators; but all these things wanted clearing up, and he was prepared to go to arbitration, for all he wanted was justice and fair play for the sake of his reputation.

Dr. TRAVERS seconded Mr. Langman's motion.

At this stage,

Mr. RUSSELL said that, to keep himself in order, he would now formally lodge a protest against the staff or their nominees voting upon this occasion, that he would ask for a scrutiny of the votes, and that he protested against the power of the governors to dismiss Mr. O'Callaghan.

Upon Mr. Russell attempting to say these words an interruption took place, booing, tapping, and sounds of disapproval proceeding from one end of the room—the end where the audience was largely composed of ladies.

The CHAIRMAN then moved: "The council, after full investigation and consideration, being of opinion that the continuance of Mr. O'Callaghan as a member of the medical staff would be incompatible with the maintenance of proper discipline of the hospital and injurious to its interests: and all the other members of the honorary medical staff having in a formal manner definitively refused to coöperate with him in the discharge of their professional duties in the hospital: it is resolved that Mr. O'Callaghan be, and he is hereby, relieved of his duties as an honorary medical officer of the hospital."

Mr. DYER EDWARDS seconded this motion.

Canon FLEMING said there was a lady present who was not credited with the number of votes to which she was entitled. That, no doubt, would strengthen Mr. Russell in his intention to have a scrutiny. He (Canon Fleming) was in favour of the motion for arbitration.

A vote was then taken, with the following result:

For Mr. Langman's motion	17
Against	106
Majority against	89

The Chairman's motion was then put to the meeting and agreed to without a further division.

The proceedings, which lasted three hours, terminated with a vote of thanks to Lord Glenesk for presiding.

THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

THE annual general meeting of the Association of Fellows of the Royal College of Surgeons of England was held on Dec. 11th. Mr. George Pollock, the President, occupied the chair. The minutes of the last annual general meeting were read and confirmed. The President stated that as his address practically embodied a report of the work done by the Association during the past year he would ask Mr. Percy Dunn, honorary secretary, to read it. The following is a summary of the address:—

The first business of importance which took place after the annual general meeting last year was the appointment of a sub-committee to meet and confer with a sub-committee of the Society of Fellows with respect to the election of the President of the College and other matters. Practically, the only result which ensued from this conference, which took place on Nov. 7th, 1894, was the decision, at the instance of the Association of Fellows, of the Society of Fellows to undertake a canvass of the Fellows upon the subject of the mode of election of the President. But out of this meeting of the two sub-committees the Association were led to adopt a resolution asking the Council of the Royal College of Surgeons of England to agree to a conjoint committee of the Council and the Fellows for the purpose of considering what alterations should be made in the existing charters of the College. This resolution was brought before the Fellows' meeting in January last.

Upon several occasions, both officially and unofficially, communications bearing upon College politics have been received from the Society of Members, but the committee of the Association has in all cases declined to pledge itself to any definite policy in this regard, leaving it to the members of the Association to act in their individual capacity as they may deem fit.

The Association has recorded in its minutes the loss sustained by the profession by the death of Mr. Hulke.

The next important matter was the appointment of a deputation to meet a committee of the Council of the Royal College of Surgeons of England on June 10th. At that meeting the deputation laid before the committee of the Council several proposals for the amendment of the charters and by-laws which had already received the sanction of the Association, and subsequently, at the request of the committee, placed these propositions in writing, together with the reasons that might be adduced in favour of them. These propositions have been under the consideration of the committee of the Council, but as that committee has not yet reported to the Council of the College no answer has yet been received by the committee of the Association.

The mode of conducting the proceedings at the half-yearly meetings of the Fellows, which appeared to the committee not to fulfil the objects for which the meetings were established through their initiative, has claimed some attention from the committee, as the result of which certain resolutions were forwarded to the Council of the College by the committee with a view to remedy the defects. The Council of the College has replied to the resolutions to the effect that the proceedings had been conducted in accordance with the regulations, but in answer to some further resolutions for the amendment of these regulations has contented itself with formally acknowledging the communication of the committee. It is still hoped that the action of the committee will bear fruit, but if not it may be advisable for further action to be taken.

The remainder of the report was occupied with an account of the proceedings of the committee in respect to the case of Mr. R. B. Anderson, already reported in THE LANCET, and recommending the members of the Association to coöperate with the Civil Rights Defence Committee and appoint representatives on that committee.

Mr. A. T. Norton read the auditor's report for the past year, and added that he would have great pleasure in rendering all the assistance in his power in keeping the books of the Association. The report was unanimously adopted, and a vote of thanks was accorded to Mr. Norton.

The following is the list of officers elected for the year 1895–6: President, Mr. George Pollock; Vice-Presidents, Mr. T. Holmes and Mr. W. Rivington; Treasurer, Mr. Tweedy; Auditor, Mr. A. T. Norton; Hon. Sec., Mr. H. Percy Dunn; Committee, Mr. W. Allingham, Mr. Herbert Allingham, Dr. Robert Barnes, Mr. Wickham Barnes, Mr. Bruce Clarke, Mr. John Couper, Dr. Ward Cousins, Mr. Gant, Mr. Victor Horsley, Mr. Jordan Lloyd, Mr. Mayo Robson, Mr. Manley Sims, Dr. C. Steele, Mr. George Jackson, Mr. C. B Keetley, Mr. George Helm, Mr. Mansell Moullin, Mr. Vincent Bell, and Mr. J. J. Purnell.

The case of Mr. R. B. Anderson was then brought forward for discussion, and the meeting unanimously approved of the action of the committee in this regard. Mr. Pollock Mr. Holmes, and Mr. Dunn were appointed the representatives of the Association on the Civil Rights Defence Committee. The following resolution was then passed unanimously: "That this Association adopts the reports of its committee and of the Civil Rights Defence Committee on the case of Mr. R. B. Anderson, and desires to express its thanks to the Right Hon. the Earl of Stamford as President and the public men and bodies constituting the Defence Committee who have stood forward in resistance to illegality, oppression, and persecution, and its appreciation of the action of the Council

of the College in uniting in defence of the rights of its Fellows and Members." Further, Mr. Holmes undertook to give notice of the following resolution for the half-yearly meeting of Fellows at the College in January next—viz.: "That this meeting learns with pleasure that the Council of the College are represented on the Civil Rights Defence Committee on the case of Mr. R. B. Anderson, and pledges itself to take every possible step to promote the objects of that committee."

Unanimous votes of thanks were severally passed to the officers of the Association for their services during the past year. This concluded the business of the annual general meeting.

THE SOCIETY OF MEMBERS OF THE ROYAL COLLEGE OF SURGEONS OF ENGLAND.

WE have received from the Society of Members of the Royal College of Surgeons of England certain "propositions for amendment of the Charters," and a statement in support of these propositions. The statement, we are informed, is published with the sanction of the President of the College.

Proposition 1 lays down "that no alterations in the constitution and external relations of the College shall be effected without the consent of the corporation."

Proposition 2 submits "that there should be an annual meeting of the corporation, to which the Council shall present a report of its proceedings, together with a duly audited balance-sheet, such report to be submitted to and approved by the meeting."

3. That the number of the Council be increased to thirty-two, and that eight of these may be Members and shall be elected by Members only.

4. No Member who has not been such for twenty years shall be eligible for a seat on the Council.

5. Members to be elected to the Council in the same way as Fellows.

6. Concerns the retirement of members on the Council.

The arguments used in the "statement" of the committee of the Society of Members are in brief as follows:—

As to the right of the Society to speak on behalf of the general body of Members, a similar body of propositions was signed by 5000 Members in 1888.

The Society of Members further suggest that the Council of the College ought to make inquiries themselves of the Members. The expense of such an inquiry is estimated at £45—i.e., £30 for postage and £15 for printing, &c.

With regard to Proposal 2, the committee think that as most of the income of the College comes from Members they ought to see how the money is spent.

"Proposal 3 contains the kernel of the whole matter." The committee consider that the College ought to show more activity in dealing with "infamous conduct," and also in suppressing unqualified practice in surgery.

As to Proposal 5, Members, as forming by far the greater part of the corporation, ought to have some share in its government. Under the new proposal the Fellows will still form three-fourths of the Council.

In conclusion, the committee earnestly ask the Council whether it would not be for the advantage of the College to allay the smouldering discontent now existing among Members.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN thirty-three of the largest English towns 5561 births and 3609 deaths were registered during the week ending Dec. 14th. The annual rate of mortality in these towns, which had been 17·9 per 1000 in each of the two preceding weeks, declined again last week to 17·8. In London the rate was 17·5 per 1000, while it averaged 17·9 in the thirty-two provincial towns. The lowest rates in these towns were 10·9 in Croydon, 11·3 in Brighton, 12·2 in Portsmouth and in Halifax, and 12·6 in Huddersfield; the highest rates were 20·4 in Manchester and in Norwich, 21·0 in Bolton, 21·7 in Blackburn, 22·8 in Liverpool, and 25·5 in Salford. The 3609 deaths included 524 which were referred to the principal zymotic diseases, against 529 and 561 in the two preceding weeks; of these, 198 resulted from measles, 92 from diphtheria, 79 from whooping-cough, 56 from scarlet fever, 53 from "fever" (principally enteric), 43 from diarrhœa, and 3 from small-pox. No fatal case of any of these diseases occurred last week in Brighton; in the other towns they caused the lowest death-rates in Croydon, Derby, Birkenhead, Burnley, and Preston, and the highest rates in Norwich, Liverpool, Blackburn, and Salford. The greatest mortality from measles occurred in Manchester, Birmingham, Norwich, Salford, and Blackburn; from scarlet fever in Hull and Birmingham; from whooping-cough in Salford, Liverpool, and Cardiff; and from "fever" in Norwich, and Sunderland. The 92 deaths from diphtheria included 63 in London, 4 in West Ham, 4 in Birmingham, 3 in Leicester, and 3 in Newcastle-upon-Tyne. Two fatal cases of small-pox were registered in Hull, and 1 in London, but not one in any other of the thirty-three large towns. There were 89 cases of small-pox under treatment in the Metropolitan Asylum Hospitals and in the Highgate Small-pox Hospital on Saturday last, the 14th inst., against 89, 79, and 87 at the end of the three preceding weeks; 18 new cases were admitted during the week, against 20, 9, and 18 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2800, against 2807, 2799, and 2805 on the three preceding Saturdays; 329 new cases were admitted during the week, against 296, 325, and 312 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had declined from 447 to 264 in the five preceding weeks, were again 264 last week, and were 208 below the corrected average. The causes of 50, or 1·4 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Nottingham, Salford, Bradford, Leeds, Newcastle-upon-Tyne, and in fifteen other smaller towns; the largest proportions of uncertified deaths were registered in Birmingham, Burnley, Blackburn, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 17·4 and 19·5 per 1000 in the two preceding weeks, declined again to 18·9 during the week ending Dec. 14th, but exceeded by 1·1 per 1000 the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 15·3 in Paisley and 15·4 in Edinburgh to 26·0 in Greenock and 29·2 in Perth. The 546 deaths in these towns included 24 which were referred to whooping-cough, 17 to diarrhœa, 10 to measles, 8 to scarlet fever, 5 to diphtheria, 4 to "fever," and not one to small-pox. In all, 68 deaths resulted from these principal zymotic diseases, against 49 and 67 in the two preceding weeks. These 68 deaths were equal to an annual rate of 2·4 per 1000, which was 0·2 per 1000 below the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of whooping-cough, which had increased from 10 to 19 in the three preceding weeks, further rose to 24 last week, of which 15 occurred in Glasgow, 4 in Dundee, and 3 in Aberdeen. The 17 deaths from diarrhœa showed a decline from the numbers recorded in recent weeks, and included 7 in Glasgow and 4 in Dundee. The fatal cases of measles, which had been 1 and 6 in the two preceding weeks, further rose to 10 last week, of which 5 occurred in Glasgow and 5 in Greenock. The 8 deaths from scarlet fever corresponded with the number in each of the two preceding weeks, and included 5 in Glasgow and 2 in Aberdeen. The fatal cases of diphtheria, which had increased from 3 to 10 in the three preceding weeks, declined again to 5 last week, of which 2 occurred in Aberdeen and 2 in Glasgow. The deaths referred to diseases of the respiratory organs in these towns, which had been 107 and 132 in the two preceding weeks, declined to 97 last week, and were 54 below the number in the corresponding week of last year. The causes of 37, or nearly 7 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 25·1 and 20·1 per 1000 in the two preceding weeks, rose again to 22·8 during the week ending Dec. 14th. During the past eleven

weeks of the current quarter the death-rate in the city has averaged 24·0 per 1000, the rate during the same period being 18·0 in London and 17·2 in Edinburgh. The 153 deaths registered in Dublin during the week under notice showed an increase of 18 upon the number in the preceding week, and included 8 which were referred to the principal zymotic diseases, against 10 and 6 in the two preceding weeks; of these, 3 resulted from "fever," 3 from diarrhœa, 1 from diphtheria, 1 from whooping-cough, but not one either from small-pox, measles, or scarlet fever. These 8 deaths were equal to an annual rate of 1·2 per 1000, the zymotic death-rate during the same period being 2·7 in London and 0·8 in Edinburgh. The deaths referred to different forms of "fever," which had been 3, 4, and 1 in the three preceding weeks, rose again to 3 last week. The 3 fatal cases of diarrhœa showed a further increase upon the numbers recorded in recent weeks, while the mortality from whooping-cough showed a decline. The 153 deaths in Dublin last week included 28 of infants under one year of age, and 39 of persons aged upwards of sixty years; the deaths of infants showed a slight further decline from those recorded in recent weeks, while those of elderly persons showed an increase. Five inquest cases and 3 deaths from violence were registered; and 54, or rather more than a third, of the deaths occurred in public institutions. The causes of 13, or more than 8 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

MOVEMENTS OF MEDICAL STAFF.

BRIGADE-SURGEON-LIEUTENANT-COLONEL KNOX has been appointed to the Charge of the Cambridge Hospital, Aldershot, in succession to Surgeon-Lieutenant-Colonel Smith, under orders for India. Surgeon-Captain Cockerill has been posted to Dover. The following officers have embarked for a tour of service in India since our last, issue:—Surgeon-Majors Hubbard, Wight, Dundon, Beamish Powell, and Sandiford, and Surgeon-Lieutenant Williams.

INDIA AND THE INDIAN MEDICAL SERVICES.

Surgeon-Captain J. G. Hojel is appointed to be Professor of Materia Medica and Pharmacy at the Grant Medical College, Bombay. Surgeon-Captain G. B. French, Personal Assistant to the Principal Medical Officer of the Bengal Command, is to hold Civil Medical Charge of Naini Tal, in addition to his military duties, during the absence on leave of Surgeon-Major W. H. Cadge. Surgeon-Major F. S. Peck is reappointed to be Civil Surgeon of Muzaffarpur. Surgeon-Captain A. G. Hendley, Civil Surgeon, on return from the leave on medical certificate granted him by the Government of India, is posted to the Balaghat District. Surgeon-Lieutenant-Colonel J. Moran, Civil Surgeon, on return from furlough, to the Gorakhpur District, and Surgeon-Major G. M. Nixon, Civil Surgeon, on return from furlough, to the Jhansi District; Surgeon-Major D. F. Barry, Civil Surgeon, is transferred from Gorakhpur to Moradabad; Surgeon-Captain L. G. Fischer, Civil Surgeon, from Moradabad to Budaun; Surgeon-Major G. A. Emerson, Civil Surgeon, from Jhansi to Dehra Dun; and Surgeon-Captain J. M. Cadell, Supernumary Civil Surgeon, from Dehra Dun to Kheri.

NAVAL MEDICAL SERVICE.

Surgeon W. Bett has been appointed to the *Halcyon*.

VOLUNTEER CORPS.

Artillery: 1st Essex (Eastern Division, Royal Artillery): Surgeon-Lieutenant T. E. Stuart to be Surgeon-Captain. 9th Lancashire: Surgeon-Lieutenant A. Jones resigns his commission. *Rifle:* 3rd Volunteer Battalion the Prince of Wales's Own (West Yorkshire Regiment): Berkeley George Andrew Moynihan, M.B., to be Surgeon-Lieutenant. 1st Volunteer Battalion the Lancashire Fusiliers: Surgeon-Lieutenant R. Mitchell, M.D., to be Surgeon-Captain. 3rd (Morayshire) Volunteer Battalion Seaforth Highlanders (Ross-shire Buffs, the Duke of Albany's): Surgeon-Captain G. H. Mackay, M.B., resigns his commission.

THE HOSPITAL SHIP FOR ASHANTI.

The *Coromandel*, which was fitted out in this country as a hospital ship, and recently sailed with the Special Service Corps and other troops and a draft of the Medical Staff Corps for the Ashanti expedition, has ere this reached her destination on the Gold Coast. The vessel, which is of 4358 tonnage and belongs to the P. and O. Company, should prove a very efficient floating hospital, according to the description that has been given of her—in the *Army and Navy Gazette* for example. The accommodation on the mess decks is for 350 men, with saloon cabin accommodation for forty officers. The hospital wards, which are spacious, well lighted, and ventilated, are painted a very pale green and fitted with ninety swinging iron cots, room being left for 100 canvas cots to be also slung if required. The ship is furnished with electric lighting throughout. The hospital wards are supplied with punkahs, and twelve lascars embarked as punkah pullers. Captain Wheler, who commands the *Coromandel*, was in charge of one of the transports employed in the Suakin expedition. The accommodation is excellent and the lighting and ventilation good. In addition to numerous port-holes, hatches, and skylights, the ship is fitted with Edmund's extraction system with specially constructed shafts for the removal of vitiated air from between decks and compartments. Arrangements for hospital cooking, over and above the usual cooking galleys, a condensing apparatus capable of supplying upwards of 3000 gallons of water per diem, a well-fitted laundry, bath-rooms, ice-making machine and ice-room, and soda-water manufacturing apparatus have been supplied, and the hospital sanitary arrangements have been carefully carried out. There is also an operating-room, furnished, of course, with the latest instruments and appliances, and a large dispensary. Quarters are also provided for the medical staff and for three lady nurses, a portion of the saloon being screened off and set apart for their use.

AN ELEMENTARY VETERINARY MANUAL.

We have received a copy of a small work entitled "An Elementary Veterinary Manual,"[1] for the use of officers attending veterinary classes. The author is Surgeon-Captain Bruce Seton of the Indian Medical Service, and the book forms one of Messrs. Gale and Polden's Military Series. We are always glad to welcome works by medical men which range beyond our own professional limits, and we are not surprised at an officer of the Indian Medical Service, who has been in charge of a Lancer regiment, devoting his spare time to a subject of such importance to cavalry officers. The book is simply and carefully written; its basis consists of notes taken at lectures in the Army Veterinary School, Aldershot, and these have been supplemented by notes and extracts from well-known handbooks. The book will no doubt be well received by officers in India, and will be very useful to those going through the army veterinary courses.

THE VOLUNTEER OFFICERS' DECORATION.

The Queen has conferred the Volunteer Officers' Decoration upon the undermentioned officers of the Volunteer Force:—*North-Eastern District: Artillery:* 1st North Riding of Yorkshire Volunteer Artillery (Western Division, Royal Artillery): Surgeon-Lieutenant-Colonel Thomas R. Pearson, M.D. *North-Western District: Rifle:* 5th Volunteer Battalion the Cheshire Regiment: Surgeon-Major Seymour H. Munro, M.D., retired. 2nd Westmoreland Volunteer Battalion the Border Regiment: Surgeon-Major George William Brumwell.

Herr Dowe, whose invention of a bullet-proof coat gave rise to a good deal of interest and attention, recently died at Wiesbaden from pulmonary phthisis.

[1] An Elementary Veterinary Manual, by Surgeon-Captain Bruce Seton, I.M.S. London: Gale and Polden. 1895. Price 2s. 6d.

FOOTBALL CASUALTY.—On the 16th inst., at Chelmsford, during a match, Chelmsford against Colchester Garrison, a player fractured his right leg, and was taken to the Chelmsford Infirmary.

METROPOLITAN ASYLUMS BOARD.—An extraordinary meeting of the Board will be held to-day (Saturday) at 12 noon to consider the question of reopening the Gore Farm Hospital for the reception of convalescent fever patients. Mr. Brass will move:—"That the Small-pox Hospitals Committee be instructed to forthwith make arrangements for opening so much of the Gore Farm Hospital for the reception of scarlet fever convalescing cases as may be found necessary and practicable."

Correspondence.

"Audi alteram partem."

THE HARD CASE OF MR. LIONEL SMITH.

To the Editors of THE LANCET.

SIRS,—The case of Mr. H. Lionel Smith, whose unjust treatment by the Government of Western Australia you commented on in your issue of Feb. 9th, has, we are glad to say, assumed a more hopeful aspect. After an eight years' struggle with what *Truth* designated as "bitter persecution," Mr. Smith found himself practically ruined and unable to obtain redress in Australia. Fortunately, however, we have in Mr. Chamberlain a Minister who acts promptly. On Aug. 8th he sent a courteous reply to an official letter on Mr. Smith's case from the Royal College of Physicians of Ireland, and this week Mr. Smith has received the offer of the appointment of district surgeon in Zululand from the Colonial Office. The salary is small, but it will enable Mr. Smith to start once again on his professional career. To do this, however, he is urgently in need of funds to meet expenses which have been incurred for the education of his children, now all but completed, and to provide for the passage and outfit of his wife and two youngest children. If prompt and substantial relief is not forthcoming we see no alternative but the workhouse for Mr. Smith and his family; but, on the other hand, if he is enabled to accept the post which has been offered him, he will have the opportunity of making a provision for them. In the eight years which have elapsed since his dismissal Mr. Smith has exhausted all his own resources, hence he is reluctantly compelled to allow this appeal to be made, and we cannot but think that there must be those within and outside the profession both able and willing to help under circumstances so urgent and yet so temporary.—We are, Sirs, yours faithfully,

JAMES F. GOODHART,
Dec. 17th, 1895. F. DE HAVILLAND HALL.

*** We have undertaken to receive and acknowledge subscriptions (vide p. 1592).—ED. L.

A PLEA FOR THE PASTEUR TREATMENT OF HYDROPHOBIA.

To the Editors of THE LANCET.

SIRS,—Having recently had a child bitten by a rabid dog brought to me I advised the parents to send it to the Pasteur Institute. Unfortunately, the poor little thing died. The anti-vivisectionists have commenced one of their usual energetic campaigns, and in the local papers endeavour to damage my professional reputation and prospects. I am asked by some neighbours why I recommend patients to resort to the Pasteur treatment for rabies. My answer is as follows, and I should be glad if you would comment on it and correct it if wrong. Hydrophobia has been recognised for centuries as one of the most fatal and intractable diseases. Up to the year 1880 every conceivable plan of treatment had been tried, and none proved in the least effectual. Of every 100 persons bitten by (presumably) mad dogs, from 20 to 70 developed hydrophobia; of these (20 to 70) rabid people everyone died and suffered horrible agony. In 1886 the Pasteur Institute was opened in Paris. Up to the present over 17,000 persons have been treated there for rabies. The total deaths have been 283, according to the anti-vivisectionists—that is, 1·66 per cent. Every one of the 283 who developed hydrophobia died in spite of every effort to save them. If these 17,000 persons had not been treated by the Pasteur method at least 30 per cent.—that is, 3200—would have developed hydrophobia and would have died. At the lowest calculation, then, some 3000 lives have been saved by the Pasteur treatment in ten years, or 300 a year, from a most terrible death. The anti-vivisectionists say that the Pasteur treatment causes hydrophobia. If this were true the deaths in 17,000 cases so treated should be 3200—the natural death-rate—plus the number of cases caused by the treatment, ever so many more than 3200. But the total deaths have been only 283. Contrasted with the fatality of the other diseases, diphtheria, typhoid fever, &c., the death-rate is very low. With these facts before him, every medical man is bound in duty and in conscience to recommend or, at least, offer the Pasteur treatment to every patient bitten by a dog presumably rabid. The medical profession are not biased in favour of anti-rabic inoculations, but would, I believe, prefer a treatment by other means, if any could be discovered nearly as successful as the Pasteur inoculations. While hydrophobia is such a dreadful death, while so many of those bitten contract the disease if untreated, while Pasteurism diminishes the cases and the deaths at least 18 per cent., and while there is no other efficient treatment before them, so long will the public demand the application of the anti-rabic inoculation to the bitten, and so long must the medical profession advise their patients to resort to it.

I am, Sirs, yours faithfully,
Twickenham, Dec. 18th, 1895. H. HOWARD MURPHY.

*** We have compared Dr. Murphy's figures with those given in the "Annales de l'Institut Pasteur" and find them calculated correctly. The 283 deaths are those given by the anti-vivisectionists. M. Pasteur used not to count deaths occurring within fifteen days of the first inoculation, so that the deaths for 1886–94 work out at 81. We would refer the opponents of the practice to consult the report of the Royal Commission appointed in 1886, an abstract of which appears in our columns of July 2nd, 1887, signed by such weighty names as those of Sir James Paget, Sir Richard Quain, Dr. Lauder Brunton, and others.—ED. L.

"TREATMENT OF SMALL-POX BY EXCLUSION OF THE CHEMICAL RAYS OF DAYLIGHT."

To the Editors of THE LANCET.

SIRS,—In your annotation under the above heading in the current issue of THE LANCET you mention the communications you have received from Dr. Moir, Dr. Finsen, and Dr. Feilberg; allow me to remind you that in 1871 (Feb. 4th and April 22nd) you published two articles on this subject by me, in which my experiments on plants and animals were described, and the reasons given on which I based my treatment of small-pox. Not to recapitulate, I may say I found, first, disease modifies the sensibility in the skin—i.e., sensation may be altered and perverted by it, due to some change produced in the nervous system not well understood; secondly, diseases that are partially eliminated by the skin increase its susceptibility to stimulation, so that what in health would be beneficial to it is by disease rendered hurtful; thirdly, light under ordinary circumstances—i.e., in health—is a desirable stimulant, but has detrimental effects in small-pox, scarlet fever, measles, &c.; fourthly, by excluding the white rays of light from patients suffering from these diseases, I find that in practice most beneficial results follow. These were the conclusions I came to twenty-four years ago, and I can say they have been confirmed in most, if not all of, the cases that have been under my care since then.

I am, Sirs, yours faithfully,
Jermyn-street, S.W. J. H. WATERS, M.D. Glasg.

"'TUBERCULOUS' *VEL* 'TUBERCULAR?'"

To the Editors of THE LANCET.

SIRS,—Kindly allow me to question the correctness of the judgment concerning "tuberculous" and "tubercular" in THE LANCET of Dec. 7th. What is the proper use of each of these words? The termination "ous" means "full of" or "abounding in"; the termination "ar" means pertaining to. In some words with both terminations the distinction is well preserved, as, for example, in "populous" and "popular." In others the distinction is nearly obliterated; but in so far as retained is to the same effect, as, for example, in "granulous" and "granular," "tubulous" and "tubular," "nodulous" and "nodular." Reference to a good dictionary, like Webster's, will settle this point. The tendency, however, is for the termination "ar" to supplant its rival. If indiscriminately used, the termination "ous," with its definite meaning, would often be wrong, while the less definite "ar" would nearly always be right. A concrete noun with the termination "ar" becomes an abstract adjective, meaning "having the qualities" belonging to the things signified by the noun; but with the termination "ous" the concrete force is retained, the meaning being "full of the

things" indicated. We may quite properly speak of "tuberculous meninges"; but to speak of "tuberculous meningitis or osteitis" is almost as bad as to speak of a "populous fallacy." A writer unable to discriminate between the two terms will therefore do wisely to adopt "tubercular" to the exclusion of "tuberculous." As to usage, on looking through the books at my disposal I find a great preponderance of authority in favour of "tubercular meningitis." The appeal to French and German usage can hardly be allowed much weight. We must surely be guided by the genius of our own language.

I am, Sirs, your obedient servant,

WILLIAM R. HUGGARD.

Davos Platz, Switzerland, Dec. 16th, 1895.

THE METROPOLITAN ASYLUMS BOARD AND THE CHAIRMAN OF THE POPLAR HOSPITAL.

To the Editors of THE LANCET.

SIRS,—You write in a leading article in THE LANCET of Dec. 14th that "it is a little disappointing to see a man of Mr. Holland's position as chairman of a hospital say in a letter to the *St. James's Gazette* that the Metropolitan Asylums Board ought to provide for every scarlet fever case in London." If my opinion is of the slightest interest, will you kindly allow me to say that my mode of communication with the *St. James's Gazette* was a hurried interview, at their request, and not by letter, and that though my words certainly bear the construction you put on them I never meant to imply that the Metropolitan Asylums Board should do more than *take cases from homes where proper isolation is impossible*, and not all cases occurring in London? This limited duty, however, would cost them the million I mentioned. My special complaint against the Metropolitan Asylums Board is that I believe they had room for our Poplar Hospital patients, though not perhaps at Homerton, and considering how very serious it was for these patients, who were injured by accidents as well as infected with fever, to be sent to homes where neither injuries nor fever could be attended to, I do think that the officials of the Board might have done much more than they did for us. Further, after the officials had refused to take the patients we applied at Norfolk House for an ambulance to remove them to their homes. There we met with a blank refusal unless our medical officer would guarantee that they could be properly isolated at those homes. This he of course refused to do. He could, of course, guarantee nothing of the sort, nor do I believe that the officials were within their legal rights in refusing the ambulance to us on such grounds. You defend the Board; but surely it is to be regretted, to put it as mildly as possible, that they should have taken this moment for giving notice to all the staff at and closing Gore Farm with its 700 beds. This does strike a layman as curious conduct, when just now is the worst fever time, and when an epidemic of scarlet fever was in existence which admittedly the Board was unable to cope with. I know that the hospital there is an exposed one, and I know that the medical authorities condemn it for that reason, which, by-the-bye, says very little for the judgment of the Board in erecting a hospital there at all. But surely any hospital, in however exposed and cold a site, gives a better chance of recovery to children than a crowded home in a crowded district, and their removal there is certainly better for the community at large.

I am, Sirs, yours faithfully,

SYDNEY HOLLAND,
Chairman of the Poplar Hospital.

Dec. 14th, 1895.

THE SLAUGHTER OF CATTLE AND MEAT INSPECTION AND DISTRIBUTION.

To the Editors of THE LANCET.

SIRS,—If, as was laid down by the deputation to the President of the Board of Agriculture, it is desirable to formulate fresh regulations for the slaughter of foreign cattle at the ports of debarkation for the protection from disease of our flocks and herds, it is even more desirable to introduce amended legislation for the protection of human beings from the perils to which they are exposed by the consumption of meat which has not been certified by competent authority to be fit for food. At present, animals brought to the market or auction sales are transported, sometimes with the infliction of much pain and hardship, to the great centres of population, and are then driven, for the most part, to private slaughter-houses, often situated in the poorest and most populous districts, where the due inspection of the animals before killing, and of the meat afterwards, is surrounded with considerable difficulty. Is it not possible for the killing to be done in public slaughter-houses near main railway stations, contiguous also to the farms where the animals have been reared, the meat being then carried, if the railway authorities coöperate, by special meat trains fitted with the necessary refrigerating chambers? The general adoption of such a method throughout the land would be for the benefit of all concerned; the pain accruing to the animals would be reduced to a minimum, the long journeys in trucks and along narrow streets would be things of the past, and the slaughtering would be performed in the humanest possible manner by licensed slaughterers. Cattle markets, auction sales, and slaughter-houses might, by such coöperation as that suggested by the Duke of Devonshire in his letter to the Agricultural Union, be under the control of the breeders of cattle themselves, to the pecuniary gain of the farmer, and thus to the substantial advantage of the agricultural interest generally: not only would the animals be inspected before killing by properly qualified veterinary surgeons, but the meat would undergo a rigid scrutiny before being despatched to the market; butchers and their assistants, who deserve well of their countrymen for their valuable services, would be relieved in a measure of grave responsibilities; a continuous supply of good, sound, wholesale meat would be the boon secured for our teeming populations; and the standard of public health would be materially raised.

To further such a reform as is here proposed the Church Society for the Promotion of Kindness to Animals and the Church Sanitary Association are engaged in promoting a memorial, already influentially and numerously signed, and the President of the Board of Agriculture has consented to receive this memorial at the hands of a strong and representative deputation headed by the Duke of Westminster. The Lord Mayor of York and the Mayors of Leeds and Durham have shown their sympathy by granting the use of their parlours for conferences to be held in those cities. The names of those who desire to take part in the deputation or to sign the memorial will be gladly received.

I am, Sirs, your obedient servant,

F. LAWRENCE, Hon. Sec.

Westow Vicarage, York, Dec. 16th, 1895.

STATISTICS OF HOSPITAL TREATMENT.

To the Editors of THE LANCET.

SIRS,—All hospital physicians and surgeons are aware of the difficulties of keeping in touch with patients when they have been discharged from the wards after surgical or other treatment. It often occurs that a patient presents himself at the out-patient department for some affection which is the sequel of some operation performed at another hospital, perhaps some years previously. The patient does not remember the date of the operation or of his admission, and although the surgeon communicates with the registrar of that hospital he is in many cases unable to find particulars of the cases. In order to cope with this difficulty to some extent I would suggest that when a patient is discharged he should be given a card—blue for medical, red for surgical cases—with his name, number in hospital register, dates of admission and discharge, and name or number of ward, with a request printed thereon to the effect that he should present the card if he again applies for relief at the same or at any other hospital. Such a card (if it were kept by the patient) would at any rate give the surgeon particulars and enable him to communicate with the registrar of the hospital where the patient had been and so to obtain particulars. Such a card might well be given out by the ward sister, who might also tell the patient that it would be to his own advantage to keep it. If only some such plan could be generally adopted I think the notes of cases in some hospitals would be kept better than at present, and so be of value in making out statistics of certain modes of treatment. I need only to mention the radical cure of hernia as an example. It is, I am well aware, only occasionally that we meet with a case of exceptional interest from another hospital,

and generally only when the patient has changed his abode and has gone to live in another district; but in my own experience it is just in those cases that we are unable to obtain satisfactory details of the past history of the case.

I should be very glad to hear if any such plan as the one proposed exists in any hospital, and to receive any suggestions with regard to it.—I am, Sirs, yours faithfully,

Grosvenor-street, W. PEYTON J. B. BEALE, F.R.C.S.

*** Mr. Peyton Beale's letter deals with a subject of considerable importance to those engaged in hospital work and so, secondarily, to the whole profession. We hope that his letter may be fruitful in bringing forth suggestions.—ED. L.

A REMARKABLE SERIES OF INFANTILE MALFORMATIONS.

To the Editors of THE LANCET.

SIRS,—The following series of congenital and accidental malformations is probably unique and seems worthy of a corner in the pages of THE LANCET. My wife's ayah tells me that her sister, a Malay, perfect in form, has given birth to seven children within the last ten years, and that all have died. Upon interrogating her, I got a report as follows. The first child, born with a deformed left pinna, lived six months. From the description this would seem to be a case of absence of the cartilage of the external ear. The second child presented a double harelip and cleft palate, and lived two months. The third child was found to be minus the left forefinger and only lived three months. The fourth child lived three days and wanted the left great toe. The fifth child showed no external deformity, but lived three months only. The sixth child presented what seems to have been a dermoid cyst of the neck. The seventh child had just died, three days after birth, and presented a large tumour on the occiput, apparently a hydrencephalocele. I regret that I have not seen the woman or any of her children, but from inquiries of her sister it seems that both the woman and her husband present no congenital deformities, and none of the infants bore any traces such as might be attributed to congenital syphilis. I am, Sirs, yours faithfully,

Singapore. H. CAMPBELL HIGHET, M.D. Glasg.

"THE BATTLE OF THE CLUBS."

To the Editors of THE LANCET.

SIRS,—I have perused with much interest the article in your issue of the 14th inst. on the working of the Royal Victoria Dispensary, Northampton. On the whole I cannot complain of its tone; it puts both sides of the question fairly enough, but your correspondent has, inadvertently I am sure, done a great injustice to one of our medical staff. He refers to a prominent medical man who has received as much as £1000 a year from the dispensary, and suggests that he does no part of the work. I can vouch from my own personal knowledge that the gentleman in question did for a number of years a very large share of the work, and still takes an active part both in seeing patients and supervising the work of his assistants, and that the lively personal interest he has taken in the institution has conduced very greatly to its success during the years he has been connected with it. I might say more about the reasons that have made him so popular, but as he will probably read this I refrain from doing so. I am, Sirs, faithfully yours,

L. L. BECKE,
Honorary Secretary, Royal Victoria Dispensary, Northampton.

Northampton, Dec. 17th, 1895.

A PROMPT REPUDIATION.

To the Editors of THE LANCET.

SIRS,—I deeply regret that the zeal of an indiscreet friend should have placed me in the unsavoury position indicated by a paragraph in your current issue, and will take care that no such incident shall again occur so far as I can prevent it. Until I read your remarks I had never even heard of the publication you criticise. While admitting the justice of your animadversion you will, perhaps, however, permit me to express a hope that the heading of the paragraph in question is intended to apply to the manner and not to the matter of the part concerning myself. The words quoted denote a position in reference to treatment which I have openly taken up for years past, and from which I see no reason for receding.—I am, Sirs, yours faithfully,

HERBERT SNOW.

Gloucester-place, W., Dec. 15th, 1895.

*** We had no intention of suggesting that Dr. Snow's particular views were "rubbish" when we placed that word over our annotation in last week's issue (*vide* p. 1520). The word expressed our mental estimation of the whole of the letter as gravely intended for the general press.—ED. L.

NYSTAGMUS OF UNKNOWN CAUSATION.

To the Editors of THE LANCET.

SIRS,—The pathology of nystagmus is sometimes most obscure. I have under my observation a case which appears to me to be even more difficult to account for, if that is possible, than the case recorded by Mr. Dunley Owen. A domestic servant aged twenty-eight consulted me first on Jan. 16th, 1893, and has been seen by me, off and on, up to the present time. In December, 1892, the movements of the eyes were first noticed. When I saw her in January, 1893, vision was $\frac{6}{9}$ with each eye, not improved by glasses. Both fundi were normal. In each eye there was combined lateral and rotatory nystagmus. She complained that when anyone was coming near her she took some time before she properly recognised who it was. She also said that she occasionally felt a little "giddy." These two symptoms came on when she first noticed the oscillation of the eyeball. The knee-jerks were normal. She has two sisters and one brother, all without nystagmus. On Dec. 16th, 1893, I noted that "the giddiness is not now present, the general health is good. She cannot say that objects move when she looks at them, but she takes time before she sees well." On Nov. 7th, 1895, with the exception of the nystagmus and slight anæmia, I found nothing wrong with her. Since this visit the anæmia has improved. In this case we can, I think, eliminate albinism, errors of refraction, diseases of the media and fundi of the eyes, insular sclerosis, lead poisoning, hysteria, locomotor ataxy, and intracranial tumour. I am, Sirs, yours faithfully,

Londonderry, Dec. 16th, 1895. E. DONALDSON.

"SHOULDER BRACES."

To the Editors of THE LANCET.

SIRS,—I agree with Mr. Bernard Roth's letter on this subject to the extent that a rigid brace simply splinting back the shoulders might have the effect he deprecates, but I doubt if such braces are ever now used. On the other hand, it is my experience as a principle that spring force, whether exerted by metal or elastic, helps atonic muscles (be they spinal, scapular, or others) to act within the range of effort that they can undertake without fatigue, and leads to their development and not to their deterioration. But Mr. Roth is so entirely imbued with the gymnastic treatment to the exclusion of all others that he pronounces what "for many years I have taught" as being quite *ex cathedrâ*, and asperses the carefulness of your editorship by believing that "you have given, most probably inadvertently, a paragraph" to treatment of another kind than his own. Nay, more, to substantiate his tenets he quotes an extract from the work of the late Mr. John Shaw. If Mr. Roth looks at p. 141 of the very work to which he appeals he will find the following enunciation: "But although the most beneficial effects are produced by exercises, we shall be disappointed if we trust entirely to them in cases where the spine is actually distorted, or even when the curvature is slight. I am often told of extraordinary cures effected merely by exercises, but I have not been able to see any such instances." This being so, it would be ungracious to disagree from the deserved encomiums Mr. Roth passes on Mr. John Shaw when he says that he was "one of the most clear-headed writers on orthopœdic surgery that I have come across," and when he concludes his letter with this satisfied termination: "I do not think any impartial surgeon would controvert John Shaw's sensible remarks written seventy years ago."

I am, Sirs, yours faithfully,

Wimpole-street, Dec. 13th, 1895. HEATHER BIGG.

"DANGERS AT SCHOOL."

To the Editors of THE LANCET.

SIRS,—My attention has been directed to a reference in an evening newspaper alluding to a paragraph entitled "Dangers at School," indicating a probable means of transmission of diphtheria and tuberculosis among school children by means of infected slates. I beg to say that I made this conjecture and reported to this effect to our sanitary authority while investigating an outbreak of diphtheria, having arrived at this conclusion by reason of certain facts which came under my observation during these inquiries, and after watching children frequently moisten their slates with saliva and then pass them on to their companions or place them among other slates to be used by their fellow-pupils at some future time. Thus, given an unrecognised case of diphtheria, recrudescent, or an infected throat, herein appears to lay the explanation of a frequent means of transmission of these diseases. I stated this publicly and superintended and advised boiling the slates in a solution of sodium carbonate.

I am, Sirs, yours faithfully,

Maidstone, Dec. 11th, 1895. PERCY T. ADAMS.

"HOSPITAL ABUSE AT BRIGHTON."

To the Editors of THE LANCET.

SIRS,—I hope you will find space in the columns of THE LANCET for a few remarks I have to offer on the above subject. Having read carefully the letter in one of your former issues sent to the dispensary committees, and signed by some of the oldest practitioners in Brighton, there are a few facts that I would like to draw their attention to, of which, perhaps, they are not aware. Why are dispensary letters given to tradespeople and those in comfortable circumstances? Simply this: because the young medical men holding appointments in those institutions, who are in a better position than the dispensary committees to judge of the circumstances of patients applying for letters, hope at some future date to set up in private practice in the district. This, of course, they consider as a good introduction, and will raise no objection to visit well-to-do patients. I would be inclined to doubt this statement if it did not come from a reliable source. But what are you to do when one of those gentlemen themselves volunteers the information? If such an unprofessional spirit prevails amongst the gentlemen holding these appointments, I see no way out of the evil, except that they should not be allowed to practise in the district afterwards.

I am, Sirs, yours faithfully,

Brighton, Dec. 16th, 1895. ONE INTERESTED.

"THE ADMISSION OF WOMEN TO THE ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND."

To the Editors of THE LANCET.

SIRS,—In reply to the letter of the secretary of the Clapham Maternity, regarding the lowering of fees by female medical practitioners and consequent degradation, I wish to point out that when this institution was started as a private speculation by Dr. Annie McCall the whole of the neighbouring district was flooded with touting circulars placed in the letter-boxes of other practitioners' patients, where, amongst other items of charges, confinements were undertaken at 5*s.* a head. This circularising of the whole district was repeated at regular intervals. The institution has since developed into one "supported by voluntary contributions." What was once a private speculation has become a maternity hospital, kept up for the benefit of two or three female practitioners and the students who have to get their cases. Many also state that the present secretary—the lady who signed the letter in your last issue—is well aware of the above facts. Will she deny that the above is a true statement? I am, Sirs, yours truly,

Dec. 16th, 1895. VIGILANS.

THE council of the Medical Guild, having discussed, clause by clause, the Draft Midwifery Nurses Bill as proposed by the Lancashire and Cheshire Branch of the British Medical Association, unanimously passed the following resolution: "That this council express their dissatisfaction with the Draft Bill as it stands and their determination to oppose it."

BIRMINGHAM.

(FROM OUR OWN CORRESPONDENT.)

Death Sentence: a Warning.

THE recent trial of the woman Eden at the Warwick Assizes revealed some painful facts. It seems that she brought on an abortion which terminated fatally, for which she was convicted of murder and sentenced to death. Another death is also attributable to her treatment—that of a barmaid from Leeds. The judge remarked that it was quite clear that this woman had been practising a wicked trade which had become far too common in this country. He spoke in laudatory terms of the medical profession in connexion with the case. The public are hardly aware of the risks run by the ignorance and recklessness of such a woman, and are wont to somewhat condone such nefarious practices when carried out at the request of the sufferer herself. The law is decisive upon the matter; it is well for society that it is so. It cannot be too well known that the practice of procuring abortion is morally wrong, personally dangerous, and legally criminal. In this instance relief is experienced by the reprieve of the condemned woman by the Home Secretary. Repugnant as such a vice is, and hideous the picture of a woman being hanged, protection must be afforded to society in the aggregate; the warning is therefore salutary and well timed.

Children and Firearms.

A shocking accident ending in the death of a child aged eleven by her brother's act lately occurred here. The brother, aged nine years, opened a drawer in his father's bedroom and found a five-chambered revolver fully loaded. Taking this out he pointed it at his sister and pulled the trigger; the little girl received the bullet in her head and fell dead instantly. The distress of the parents was great. The father stated that he bought the revolver owing to a scare of burglars; placing it in a secret drawer, he considered it safe. The fear of burglars is a lesser one than the danger of a loaded firearm in a house where it is possible for children to get access to it. This is a melancholy illustration of the fact. To place such weapons under lock and key is an obvious deduction from the risk of such terrible accidents.

Prosecutions for Drug Adulterations.

Some important and interesting prosecutions took place at the police-court recently. Four retail chemists and druggists were summoned for selling articles which were not of the nature, quality, and substance demanded. In two of the cases tincture of iodine, and in the other two tincture of aloes, had been sold which were in excess of the strength prescribed in the British Pharmacopœia. The medical officer of health and public analyst stated that one sample contained 40 per cent. more ingredients in solution than the Pharmacopœia ordered, while, at the same time, the spirit was much stronger than it should have been. The principle is of great importance, for in buying a drug it is necessary that it should be of known quality. Fines of £1 and costs were imposed notwithstanding the ingenious defences set up.

Queen's College.

After two unsuccessful attempts to hold an annual meeting of the governors of this college a quorum was made up on the 12th inst. The severance of the medical faculty has evidently left the college in straitened circumstances. Sir Walter Foster stated that the supply of theological students from the universities was not enough, and that it was necessary to fall back upon such colleges as these. He hoped always to be connected with it, and expressed his regret at anything approaching the decline of such organisations. He advocated amalgamation with similar colleges as a relief to the present difficulties. Dr. Wade resigned his position as governor, writing that he was interested in medicine and not in theological teaching. Altogether the college is in a very poor way, and threatens to die from inanition if some vigorous efforts are not made for its recovery.

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Unqualified Practitioners.

TWO cases were heard at the county-court on the 9th inst., when local quacks received a slight check. In the first the plaintiff sought to obtain the return of 21 guineas and

damages from "a hernia specialist" named Sherman, for alleged negligence and fraud. He went to Sherman and signed a paper specifying what he required, and what he was suffering from, then submitted to a "preliminary examination," and paid a guinea. He was told he had a rupture on the right side, and could be cured for £20. He paid the money after the defendant assured him he could cure him, and received a receipt and agreement, which, however, gave no guarantee as to the cure; but Sherman gave his word "as a gentleman" that he could and would cure the rupture. "The plaintiff accepted the statement, and thereupon the defendant fastened an appliance upon him and gave him a bottle of his curative compound." After enduring much pain, and being several times assured that he was "getting cured," he saw Mr. Whitestone of Middleton Junction, who told him he had a slight rupture on the right side only and advised him to wear a truss, and said the pain was due to "the appliance." After all this he saw Sherman again, who then said he had a rupture on the left side and promised to cure him for ten guineas, but this time he gave up the "appliance" and Mr. Sherman as well. Mr. Whitestone, Mr. Walter Whitehead, senior surgeon to the Manchester Infirmary, and Mr. Robert Collier stated in evidence that the appliance—as it was always called—was an improper one. The defendant stated that "he had been carrying on his present business nearly four years, and before that was with his father, who had a similar business in London, and that "prior to engaging in his present business he was connected with horse-trotting in the United States." According to the newspaper report, "Dr. John Tanner of London, who held a number of high qualifications, said he had examined the appliance referred to, and thought very highly of it. In his opinion he had never seen anything better." His Honour Judge Parry said the case was important to the public, "because one could not but know, looking at the newspapers daily, of the large number of unqualified medical practitioners who were paid large fees. ..... The question was, Did the defendant tell lies to induce the plaintiff to pay £21 for an article which might perhaps be worth *10s. 6d.*?" He held that there had been fraudulent representation, and gave judgment against the defendant for £22 and costs; so that the issue turned, not on irregular or unqualified practice, but on fraudulent trading. The second case was an action against Robert Whitehead, a "cancer specialist" of Manchester, for £15 damages. The plaintiff, a cook, saw the defendant early in the year and was told she was suffering from weakness. Two months later she noticed a growth on the chest, which he said was a tumour, adding that it would turn into a cancer. He gave her some plaster and medicine and "painted the place with something which gave great pain." Her mistress sent her to Mr. Walter Whitehead, who removed the growth. In his evidence he said the growth was not a cancer and the treatment had been barbarous and cruel. Mr. Alexander Wilson of Manchester gave similar evidence. The defendant said he had applied his treatment with "profound success." "In all other cases he had treated for a similar purpose he had never known inflammation to follow." These cases always prove the rule by being the exceptions. The judge said "the defendant held himself up as being able to cure cancer." He appeared to have told the plaintiff that her complaint might become a cancer, and applied his specific with harmful results. "As long as people would pay for unqualified assistance they must be allowed to do so. In this case definite harm had been done, and the woman had to go to a hospital to undergo an operation by a man of real and high qualification." She was awarded £10 and costs. Here, again, the unqualified practice goes for nothing, and the verdict is for the injury done to the plaintiff. Quacks have many advantages in this happy land.

A "Miracle" at Stockport.

There has been some excitement at Stockport over the following case. The wife of a mill hand, now forty-eight years of age, is said to have taken to her bed sixteen years ago, and to have been unable to walk till about a month since, in spite of medical assistance of all kinds. She is stated to have been an in-patient of the Stockport Infirmary seven times. On the day the "miracle" occurred she seems, according to the account given, to have had a strong mental impression, as she says she distinctly heard a voice say: "Arise, my child, thou shalt walk again"—a somewhat comical way of addressing this woman of forty-eight. Thereupon "she got out of bed and walked across the floor, saying 'Lord help me!' Since that time she has had no difficulty in walking." It seems hard on the husband that she waited so long before hearing the voice, and a pity that it cannot be claimed as a cure by a hypnotic "suggestor." Perhaps, however, one "suggested" at a distance.

Habitual Drunkenness.

A woman only twenty-five years of age was brought the other day before the Burnley magistrates for the fifty-eight time for drunkenness, having been found drunk two hours after leaving the court on the previous Wednesday, where she had been fined for the third time within a week. "She had been in a girls' home and given up as hopeless, and the police, it was stated, frequently overlooked offences, as they were tired of locking her up." She must be well known to the local publicans, who, to their disgrace, supply her with drink, and who deserve punishment quite as much as she does. She has probably no wish to restrain her craving for drink, and no power if she had the wish. Surely this is a case where she should be protected from herself and detained in a suitable asylum, both for her own sake and for the safeguarding of society against the risk of her presenting it with a family of hereditary drunkards.

Life-Saving Round Manchester.

The Humane Society for the Hundred of Salford makes a presentation of medals at its annual meeting, which was held the other week in the Town Hall, the Lord Mayor being in the chair. The saving of thirty lives during the year, the greater number from drowning, was acknowledged by various rewards. Eighteen silver medals, one silver bar, and eleven money rewards were given. A man named Unwin, employed on the Rochdale Canal, has saved many lives from drowning, and has already received the gold medal of the Society, with two gold bars, a silver medal with two silver bars, and on this occasion another silver bar was added to the ribbon of the medal to commemorate his saving a boy this year from drowning. Besides these medals, twenty-one silver badges were given to boys and girls from some of the schools of the city, who in competitions had shown themselves sufficiently "proficient in swimming exercises to be enabled to save life." A "dummy figure," on which life-saving can be practised, has been provided at each of the public baths and found very useful in teaching. The public swimming-baths are popular, and the teaching of the best modes of seizing a drowning person in the safest and most efficient manner is worthy of every encouragement.

National Society for the Prevention of Cruelty to Children.

A grand bazaar, extending over several days, in aid of this society, has been held here, and closed on Saturday last. It has been supported by Lancashire chiefly, but parts of North Staffordshire, Westmorland, and Cheshire have joined in the work. The receipts have amounted to £10,300, and a subscription has been organised to defray the expenses, so that the total received may go to the society. The receipts will be increased somewhat, as the unsold goods were yesterday disposed of by auction. The special object of the bazaar was to aid in the establishment of a reserve fund of £40,000, towards which about £25,000 have now been obtained by similar efforts in various parts of the country. When one thinks of the almost daily records of gross and often fiendish cruelty to children, it seems as if the society should be approved by all humane people; but, from a letter in this morning's *Courier* from a "victim," who, however, has the courage to sign his name, it does not appear to be so, and he quotes from Mr. Justice Grantham's charge to the grand jury at the York assizes. As reported in the *Manchester Weekly Times*, he referred to this society and said "it was very dangerous that the society should interfere with prosecutions," and that it was desirable that these prosecutions should be in the hands of the police, who represented the Crown, and whose duty it was not to get convictions, but to further the administration of justice, whereas this society appealed for support on the ground of what they did, and quoted the number of convictions. He adds that "it would be a sad day indeed if the police should become so negligent of their duty that their duties should be taken up by a society, and the police relieved of their responsibility." The existence of such a society in no sense can be taken as doing away with police responsibility. Many causes may interfere with the efficiency of police supervision, and it may be asked, How many of these convictions (which we may safely assume to be just, as the law is administered by Mr. Justice Grantham and his colleagues) would have occurred if it had

not been for this society? Its formation was due to this very inefficiency of the police to prevent cruelty to children, and the law as administered may be trusted to check any prejudiced or malicious prosecutions, if we may suppose them to be attempted.

Dec. 17th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Professor Annandale's Health.

SOME weeks ago Professor Annandale had so far recovered that he was able to resume the duties of his chair in so far as to deliver the regulation lectures. This he has continued to do, but it has been thought advisable that he should go for a trip to the Cape. He will sail early next year and will be absent for about four months. Many of his old students in South Africa will be pleased to meet their old teacher.

Leith and Edinburgh.

The question of the proposed temporary hospital which Edinburgh desires to erect within the Leith boundary has been adversely pronounced upon by the Leith Dean of Guild Court. The question will probably go to a higher court.

The Royal Infirmary Kitchen Concert.

The time-honoured Kitchen Concert was held last night in the Edinburgh Royal Infirmary, and passed off with the customary *éclat*.

The Christmas Vacation.

The Christmas vacation will begin in Edinburgh on Monday next and last for a fortnight.

The Edinburgh Medico-Chirurgical Society.

This society will hold a special meeting to-morrow (Wednesday) afternoon for the exhibition of patients and specimens. The society only occasionally has these clinical meetings, but many members think they are very useful and could with advantage be held more frequently. The time of meeting is also of the nature of an experiment.

Benefactions to Glasgow Infirmaries.

The trustees of the Bellahouston fund have made the following additional bequests: 1. To the Royal Infirmary (1) a grant of £2500 in supplement of an equal sum already paid by the trustees for the better equipment of the medical school; and (2) a grant of £7500 towards the erection of a pathological museum and laboratory and another operating theatre to be called the "Bellahouston theatre." 2. To the Western Infirmary (1) a grant of £3500 for the erection of another operating theatre, to be called the "Bellahouston theatre"; and (2) a grant of £5000 towards the erection of pathological buildings. 3. To the Victoria Infirmary a grant of £6000 for the erection and equipment of a dispensary for out-patients, to be called the "Bellahouston dispensary."

Glasgow Maternity Hospital.

The following appointments have been made to the hospital staff:—Physician-accoucheur, Malcolm Black, M.D.; Assistant Physician-accoucheur, R. Jardine, M.D.; House-surgeon (in-door), A. A. Warden, M.B.; House-surgeon (out-door), A. Kay, M.B. Professor Murdoch Cameron has retired from the acting staff, his term of office having expired.

Scottish Poor-law Medical Officers' Association.

An association having for its main object the promotion of the interests of medical officers appointed under the various local authorities has recently been formed. The first meeting was held in Glasgow on the 9th inst., when office-bearers for the current year were appointed.

The Victoria Infirmary, Glasgow.

The eighth annual report of this infirmary shows that the accommodation provided by the new wing recently erected has been fully utilised, every bed during the past year being nearly continuously occupied. The average cost of each fully-occupied bed has been £62 3*s*. 5*d*., and the average cost per patient £5 16*s*. The directors thankfully acknowledge a donation of 1000 gs. from Mr. Cameron Corbett, M.P., towards the expenses of the out-door dispensary, as also the sum of £6000 from the Bellahouston Trustees.

Aberdeen Medico-Chirurgical Society.

The annual dinner of the Medico-Chirurgical Society of Aberdeen was held on Saturday evening in the Medico-Chirurgical Hall, King-street. Professor Stephenson occupied the chair. Dr. Ogilvie Will acted as "croupier." The chairman submitted the loyal and patriotic toasts, which were duly honoured. A very large number of members and guests were present, and the speeches were bright and good.

Dec. 17th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Mr. William Dudley White.

ALTHOUGH not connected with any of our clinical hospitals, Mr. Dudley White was very widely known and esteemed by the medical profession in Dublin. He held for many years one of the dispensaries of the North Dublin Union and was visiting physician to St. Mary's Industrial Schools and to the Hospice for the Dying at Harold's Cross. His father was a prominent citizen of Dublin, where he filled the position of coroner; while his son, Mr. J. Dudley White, is at present a distinguished undergraduate and scholar of Trinity College. The deceased gentleman's funeral was very largely attended. At the general meeting of the Dublin University Philosophical Society on Thursday last the following resolution was carried unanimously: "That the Society expresses its deep sympathy with Mrs. White and with Mr. Dudley J. White (Sch.), honorary registrar of the Society, in their great bereavement, and that the Society do now adjourn as a mark of respect and sympathy." The motion was proposed by Mr. R. J. Rowlett (Sen. Mod.), honorary secretary, and seconded by Mr. R. T. Harris, M.A. The society then adjourned without transacting any business.

Dublin Orthopædic Hospital.

The annual meeting of the friends and subscribers to this hospital was held on the 12th inst. in the board-room of the institution. Mr. Swan read the report, which was of a highly satisfactory character.

Infectious Diseases in Dairy Premises.

The guardians in Belfast, having written to the Local Government Board requesting them to name the infectious diseases the existence of which in dairy premises would justify the guardians in having the dairy closed, have received a reply that the medical officers of the Belfast union of guardians, from their professional attainments and experience, are well qualified to advise the guardians on the question, but that it appears to the Local Government Board that the existence on dairy premises of any of the following diseases would justify the guardians in taking action—viz., cholera, small-pox, typhus fever, enteric (typhoid) fever, puerperal fever, scarlet fever, and diphtheria. The question of measles being included is left to the guardians' medical officers. The value of this communication lies in the circumstance that it specifies the names of the diseases for the existence of which a dairy may be closed, because, as a guardian present (Dr. Gibson) at the last meeting stated, some time ago there was a difficulty in securing a conviction in a case where typhoid fever existed in a dairy owing to the medical officer hesitating to say whether typhoid fever was infectious, as distinguished from contagious, the regulations formerly only applying to such cases as, in the opinion of the medical officer, were contagious.

Belfast District Asylum.

Dr. O'Farrell, inspector of lunatics, in his memorandum of inspection of the above asylum on Nov. 1st, which has just been published, states that he believes no public institution in the United Kingdom is at present more overcrowded than this asylum; yet he found every department orderly and clean, while its bill of health is favourable and its mortality-rate very low. With such perilous surroundings, with dormitories so full that there is scarcely space for beds, he thinks the resident medical superintendent deserves the greatest credit for his good and careful management of the institution. It is a curious thing that with so much zymotic disease prevailing in Belfast, there have been no cases in the asylum.

"The Rate of Speed for Ambulances."

I understand that the Police Committee of the Belfast City Corporation have, in deference to the verdicts of the

coroner's juries,[1] decided to allow the ambulance carriages, when summoned to an accident, to go at a rapid pace, and not, as complained of, merely at a trot as formerly.

Typhus Fever in Ireland.

I regret to say that the hopes of modern sanitary authorities, that this disease—which in Ireland has so often claimed as its victims members of the medical profession—would soon become eradicated, are being so very slowly realised. I have reported in this column accounts of outbreaks at Ardboe (in the vicinity of Lough Neagh), from which the patients were removed mainly to Cookstown Workhouse, and also at Ballyclare, where there has been a very serious epidemic. I am sorry to say the disease has broken out in Killybearn, in the Magherafelt Union. So far in Belfast at present typhus fever is not prevalent, but if introduced its spread would not be diminished owing to the want and poverty which are following in the wake of the present most unfortunate strike of the ship-building engineers. A rather serious outbreak has also been reported from a town called Shillelagh in the county of Wicklow. Twenty-four cases of epidemic typhus fever are now being treated in the workhouse hospital there.

Belfast Naturalists' Field Club.

Dr. Lorrain Smith, Lecturer on Pathology at Queen's College, Belfast, gave, on Dec. 13th, a very interesting lecture on the Study of Bacteriology before the microscopic section of the Belfast Naturalists' Field Club.

Pollution of the Water-supply of Cork.

Mr. Donovan, superintendent medical officer of health of Cork, has made a most important report relative to the water-supply of the city. He stated it had come to his knowledge that the sweepings of the streets and the filth from the back-yards of Macroom were actually carted into the Lee as it passed that town. As the river so contaminated furnishes practically the sole water-supply to Cork, Mr. Donovan urged the extreme importance of impressing on the guardians of the Macroom Union the grave responsibility they incur, and he pointed out that as typhoid fever is somewhat more than usually prevalent in Cork at present, it is all the more requisite that possible sources of contagion should be avoided. The urban sanitary authority accordingly addressed a very strong remonstrance to the Macroom guardians, and should that prove unavailing I have reason to believe that the law will be invoked.

Who ought to Pay the Substitutes of Dispensary Medical Officers who have been Subpœnaed by the Crown?

This is a question which was proposed for the immediate solution of the Dispensary Committee of the city of Limerick. Two of the dispensary medical officers were ordered, under the usual pains and penalties, "all business whatsoever being put aside," to give evidence before the representative of Her Majesty at the winter assizes recently held in Cork. Accordingly, before proceeding to Cork the two medical gentlemen named for their committee two substitutes, and the latter took steps to convey to the committee that they could not put their services at the disposal of the guardians without a remuneration at the rate of three guineas a week. The secretary hastily convened a meeting, and the committee came to the conclusion that under the circumstances there was no course open to them but to agree to the proposed terms. Some of the newspapers grumble, and say it is very exacting on the part of the dispensary medical officers to expect to be paid salaries for the performance of duties which they cannot possibly discharge, owing to their absence in an adjoining county, whilst at the same time they are in receipt of handsome remuneration from the Crown. But the newspapers forget that the dispensary officers are allowed no option. They must give evidence which is beneficial to the ratepayers. For the "handsome remuneration" of three guineas a week they are obliged to neglect their private practice, which in many instances is their principal source of income, and a certain section of the public think they ought to be still further punished by the reduction of their salaries.

Lunatic Asylums in England, Ireland, and Scotland.

Mr. Kenny has procured a return relating to the number and treatment of pauper lunatics, which contains some interesting figures. From it I learn there is accommodation for 67,842 in England, 11,418 in Ireland, and 10,444 in Scotland. In England and Scotland the number of inmates did not nearly equal the number for which there was accommodation, but in Ireland it exceeded it by more than 1000. The annual cost of maintenance per head is £41 in England, £21 in Ireland, and £20 in Scotland. An interesting question for alienists to solve is why, as is shown by the return, female lunatics are in a majority in England and Scotland and male lunatics are in an enormous majority in Ireland.

Dec. 17th.

[1] THE LANCET, Dec. 14th, 1895, p. 1544.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Overcrowding at the Faculty of Medicine.

I HAD occasion to communicate to your readers in a recent letter the new rule which shuts the doors of the Paris Faculty on would-be students who, being foreigners, are not *bacheliers*. It is very evident that the authorities are alarmed at the ever-increasing number of entries, and, if I am correctly informed, at least one aspirant of British nationality has been refused a student's ticket, even though he had duly passed his *bachot*. In this case he was referred to the British Ambassador, the only consolation vouchsafed him being that the intervention of Lord Dufferin might possibly procure him the coveted admission. That matters are really serious at the Faculty from overcrowding is incontestable. The current number of the *Gazette des Hôpitaux* ("La Lancette Française") gives a prominent place to an alarmist article on the subject. The writer, who prints a graphic chart in support of his statements, very aptly asks what is to become of all the young men after graduation, seeing that even now most practitioners have much difficulty in making both ends meet. He accordingly calls upon the Faculty authorities to protect the aspirant against himself, and to stem a tide that can only end in disaster. It is, moreover, certain that such a glut of students must bring about a deficient standard of education, and that, therefore, both diligent and idle students must suffer from this plethora. For instance, last year 1348 names were on the dissecting list; now, to meet this demand, only 934 entire bodies and 589 bodies which had undergone post-mortem examination were received, and these had to serve in addition for competitions, examinations, laboratory, lecture, and research purposes, and for the classes of operative surgery. These left only 496 subjects for dissection distributed amongst 1348 students. The dissecting-rooms, large as they are, can only accommodate 720 workers; 200 more have, by a recent arrangement, been distributed amongst the various hospital amphitheatres. What become of the remaining 428? Clinical work is also, as may be imagined, heavily handicapped. Last year the number of *stagiaires* (ward work is compulsory on every student, who, if not an extern or intern, is called a *stagiaire*) was 1000; this year it will reach 1400. To meet this difficulty an auxiliary corps of clinical teachers has been organised, and, in addition, the Faculty has had recourse to the *bonne volonté* of volunteer professors, who cannot be paid owing to deficiency of funds. New regulations fix the duration of each student's *stage* in the wards at three years. This will give 2000 *stagiaires* who will have to be provided with instruction. The remedy suggested by the writer is to discourage entries and encourage the development of medical education at the provincial faculties and especially at the provincial preparatory medical schools. It is suggested, also, that the examination for the M.D. Paris should be rendered still more stiff, and if one may judge from the figures below there certainly would seem to be some scope in this direction. At the First Examination for the degree there is an average of 2·9 per cent. of candidates adjourned; at the Second Examination, first part 24·54 per cent. and second part 9·24 per cent.; at the Third Examination, first part 15·59 per cent. and second part, 17·39 per cent.; at the Fourth Examination, 16·03 per cent.; at the Fifth Examination, first part 10 per cent. and second part 8·56 per cent.; and for the Thesis, 0·55 per cent. As regards the admission of foreigners into the Faculty, it is suggested in the *Journal de Médecine de Paris* that, while the non-indigenous student be received with open arms, he should, after graduation, be denied the right to practise on French territory, his degree becoming thus a purely honorary title.

Recurrent Gonorrhœal Rheumatism.

Dr. Emery presented to the Société Française de Dermatologie et de Syphiligraphie (Dec. 12th) a man who had for the nineteenth time had gonorrhœal rheumatism and ten attacks of gonorrhœa. The first attack of gonorrhœa occurred in 1876; it was after the fourth (in 1878) that he had seven successive attacks of rheumatism, which left considerable deformity of the feet resembling that of chronic polyarthritis deformans, and a deformity of the middle finger which assumed the shape of a radish. M. Mauriac recalled in this connexion the history of a man who had during twenty-one years an annual attack of gonorrhœa accompanied with rheumatism. M. Fournier once had under his care a young man in whom each sexual act, even though means were taken to prevent infection, infallibly provoked an attack of rheumatism. So sure was he of this result that on these occasions he ordered his lunch to be served in bed on the morrow. Here there was no question of a fresh attack of gonorrhœa, the sexual orgasm sufficing to relight the joint pains. This would seem to support the medullary theory of the affection, and M. Gastou cited a case of blennorrhagic rheumatism where there was present disseminated muscular atrophy outside the articular area, which atrophy was considered by M. Oudin as being of medullary origin. M. Fournier remarked that directly he saw Dr. Emery's patient he diagnosed gonorrhœa from the radish-shape of the deformed fingers. A similar deformity exists in arthritis deformans, but in the latter disease all the digits are deformed, whereas in the gonorrhœal type, only one or two are involved.

Persistence of the Diphtheria Bacillus.

MM. Le Gendre and Pochon[1] have had under observation for the last fifteen months a child who, in less than three years, has had three attacks of diphtheria (once faucial, once buccal and nasal combined, and once nasal and faucial combined). Since the methodical bacteriological examination of the nasal and pharyngeal mucus has been undertaken (thirteen times since September, 1894), Löffler's bacillus has been invariably discovered, either retaining its virulent properties or deprived of them (not killing the guinea-pig), and either appearing in the form of average bacilli or being dwarfed, or again assuming the shape of the "coccus Brisou." Sometimes the bacillus was present alone and sometimes associated with the staphylococcus. Copious nasal and pharyngeal douches with a 5 per cent. solution of Labarraque's liquor caused the temporary disappearance, total or partial, of the bacillus. But a suspension of the treatment for some time is followed by a change in the child, who loses his gaiety, appetite, and colour; an examination then reveals the presence of the micro-organism. It is evident that it continued to lurk in the recesses of the nasal mucous glands. This example of latent microbism is worthy of record.

Dec. 17th.

ROME.

(FROM OUR OWN CORRESPONDENT.)

The Battle of Amba-Alagi: the Red Cross.

THE reverse that has befallen the Italian arms in Abyssinia is but the prelude to the extension of hostilities, and already large reinforcements are on their way to the seat of war. As to the battle in which Major Toselli and his column of native troops were cut to pieces, it was so completely a surprise that much of what is interesting in such engagements is necessarily wanting. So far as advices to hand indicate, there was no medico-military service on any considerable scale, and beyond the fact that Dr. Jacopetti ("tenente medico") is among the slain, we know nothing as yet as to how far the medico-military arm was engaged. As to the Red Cross, there is no doubt that its resources and *personnel* will share in the general reinforcement now called for.

The Sale of Quinine.

Signor Boselli's Bill, by which the right to sell quinine of guaranteed purity will be conceded to those shops in town and country already privileged to sell salt, tobacco, and postage-stamps, has, not unexpectedly, evoked much criticism, favourable and unfavourable. I have already given what has been advanced in the former sense, and which may be summed up in the fact that the Bill is framed to meet exceptional circumstances and to make quinine obtainable in malaria-stricken localities where the chemist and druggist is unknown. On the other side, it is urged that this concession is an invasion of the pharmaceutical province; that the Government which exacts high qualifications from the dispenser of drugs has no right to "poach on his preserves" and compete with him in the sale of one of the most largely employed preparations in the pharmacopœia. The dignity of the apothecary's art, moreover, is compromised by raising the tobacconist to the rank of a vendor of quinine. Another objection which I have not seen urged is this: that quinine, unless medically prescribed and protected as to its sale by the recognised consensus between practitioner and apothecary, is a source of danger—"a veritable poison to the vaso-motor system," as Dr. Tommasi Crudeli has described its abuse; and that to place it in the power of the ignorant countryman to dose himself with it *ad libitum* is to make a valuable remedy a source of positive disease. In all this there is undeniable force, add to which that the action of the Government in intervening between the public and the apothecary is but another example of its perennial blunder in beginning at the wrong end. Why not drain the marshes and reclaim the derelict lands that breed malaria? Why, in its neglect of this duty, go out of its way to innovate mischievously in the dispensing of a powerful drug which ought never to reach the public except through the combined medium of practitioner and apothecary? To this the Government apologists reply that the apothecary cannot be hurt or compromised where he does not exist; that the Bill contemplates facilitating the sale of the drug in those two-thirds of Italy where malaria is prevalent, but where no druggists' shops are to be found; that while the reclamation of the malarious tracts is not being overlooked, the fever-stricken labourers must in the meantime be protected by a drug which is to them what the Davy lamp is to the miner; and that the Bill is only provisional, remaining in force not a day longer than the rapidly diminishing prevalence of malaria makes it necessary. The controversy is a grave one, and before the Bill passes through committee it will undoubtedly be modified in a sense more favourable to the pharmaceutical interest.

Dec. 16th.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Cholera News.

SINCE cholera was first officially discovered it is now exactly two months, and there have been 1010 cases reported, of which 840 have died. This ratio is greatly in excess of the real mortality rate, for it must be remembered that, whereas the deaths cannot be concealed, many slight cases of the disease are never recognised as being anything more important than diarrhœa. Even in England in 1892 and 1893 it was found necessary to make the notification of diarrhœa in cholera districts compulsory, and, moreover, to pay the notifying medical men, before the disease was stamped out. Such notification will be impossible in Egypt for many a long day, because so long as the capitulations exist it is impossible to compel natives protected by foreign Powers to do anything sanitary. The daily bulletins for all Egypt give the following figures for the past week: 34 admissions into hospitals with 33 deaths, and to these, 21 deaths must be added as having occurred outside the hospitals. Cholera seems to have been successfully stamped out of the canal which furnished so many infected villages last month, and at Mansourah the schools have been reopened. Two cases have occurred in one of the native quarters of Cairo, both being children of a man who evidently imported the disease here from Zagazig. He was an itinerant beggar who lived on the precarious bounty of those who were willing to have the Koran read to them. It appears that he went to Zagazig on Nov. 28th, returned to Cairo on the 30th, and died in his miserable lodging here on Dec. 1st. As there was a history of his having suffered from dysenteric diarrhœa for three months, the native medical man who attended him before death certified that he died from chronic dysentery. However, on

[1] Société Médicale des Hôpitaux, Dec. 13th, 1895.

Dec. 6th at 10 P.M. his daughter aged eighteen was taken ill, and she died twelve hours later. The case clinically was one of cholera, and bacteriological examination of the ileum confirmed the diagnosis. In the night of Dec. 9th a son of the dead beggar aged seven years was taken ill, and he died at 3 A.M. on Dec. 11th. His case, both clinically and bacteriologically, was also cholera. Immediately the first case was found the house was isolated and the various inmates of it kept under medical observation. As the house consists of several poor tenements, some denizens of which were intending to start for Upper Egypt, Dr. Rogers Pasha has taken the wise precaution of temporarily conveying all the family and the dwellers in this infected house out to the desert at Abbassiyeh, where they will undergo a quarantine of seven days. It is needless to say that all necessary disinfection of the house and its contents, and of the cesspool which was within one yard of the well (not used for drinking water, but often used for various other purposes), has been ably carried out. The heads of the Sanitary Department are personally superintending this work. As the disease is confined to this one house in Cairo there is no reason why it should not be successfully isolated here as it has been in the big towns of Mansourah and Zagazig.

Precautions in Cairo.

Since the beginning of October the Special Sanitary Commission for Cairo has been diligently at work. A great improvement has been made in all surface cleanliness such as the sweeping and scavenging of streets, markets, stables, dairies, &c. This is not an unimportant labour if one remembers that many of the natives have no latrines in their houses and that there are as yet no public closets except those attached to the mosques. The English Commandant of Police tells me he has never seen Cairo look so clean before. The insides of huts and stables have been limewashed, many faulty wells have been closed, and several places in which water is supplied gratis have been erected in Boulak and Old Cairo by arrangement with the water company. The mosque cesspools have been compulsorily emptied by a pneumatic odourless system, and have then been disinfected. The public baths, which have the economical habit of storing up dustbin refuse for fuel, have been restricted to keeping only a supply for twenty-four hours on their premises. If Dr. Rogers succeeds in organising this reform it will be a cheap and salutary way of utilising each bath in the town as a public destructor.

Precautions in Zagazig.

Though Zagazig is now free from cholera, the work of prevention is not being allowed to abate. Wells are being bored in six different parts of the town, and water from them, taken from a depth of thirty feet, is now being analaysed by the Government chemists in Cairo. The transport of milk and cream from all infected districts has now been forbidden.

Cairo, Dec. 11th.

Medical News.

UNIVERSITY OF LONDON.—The following candidates passed the M.S. Examination recently:—

Aldrich-Blake, Louisa B., M.D., London School of Medicine and Royal Free Hospital.
Hamilton, E. T. B., M.D., B.Sc., Guy's Hospital.
Sheen, Alfred William, M.D., Guy's Hospital.

The following candidates passed the B.S. Examination:—

FIRST DIVISION.

Barnard Harold Leslie, London Hospital.
Berry, Frances May D., M.D., London School of Medicine and Royal Free Hospital.
Chaning-Pearce, David Arnold, Guy's Hospital.
Hull, Charlotte Elizabeth, Royal Free Hospital.
Hunt, George Bertram, University College.
Pugh, William Thomas Gordon, Middlesex Hospital.
Russell, Alfred Ernest, St. Thomas's Hospital.
Shaw, Harold Batty, University College.
Sloane, John Stretton, B.Sc., St. Bartholomew's Hospital.
Thomas, Thomas Morrell, Guy's Hospital.
Turner, William, King's College.

SECOND DIVISION.

Appel, Elizabeth Louise C., B.Sc., London School of Medicine and Royal Free Hospital.
Armitage, Frances, London School of Medicine for Women.
Blake, Victor John, University College.
Bodman, John Hervey, University College, Bristol, and St. Bartholomew's Hospital.
Brown, Joseph Norwood, University College.
Byrne, Peter Kevin, B.A., University College.
Corthorn, Alice Mary, London School of Medicine and Royal Free Hospital.
Coutts, Francis James, University College.
De Segundo, Charles Sempill, St. Bartholomew's Hospital.
Dimsey, Alfred, University College.
Evans, Daniel Edward, St. Mary's Hospital.
Every-Clayton, Leopold E. V., Guy's Hospital.
Haines, John William, St. Bartholomew's Hospital.
Handley, William Sampson, Guy's Hospital.
Hopton, Ralph, Yorkshire College.
Hora, Julian, Guy's Hospital.
Horner, William Ernest Leethem, University College.
Hunnard, Arthur, University College.
Jewell, William Henry, Guy's Hospital.
Levick, Harry Driffield, St. Thomas's Hospital.
Martin, Antony Alexander, St. Mary's Hospital.
Miskin, Leonard John, St. Thomas's Hospital.
Paling, Albert, Middlesex Hospital.
Parry, Leonard Arthur, Guy's Hospital.
Richmond, Benjamin Arthur, B.Sc., Guy's Hospital.
Rodocanachi, Ambrose John, B. Sc., University College.
Salter, Alfred, Guy's Hospital.
Smith, Frank Addinsell, St. Bartholomew's Hospital.
Sowry, George Herbert, St. Bartholomew's Hospital.
Steinhæuser, John Robert, Guy's Hospital.

The following candidates passed the M.D. Examination:—

MEDICINE.

Adkins, Albert James, St. Thomas's Hospital.
Bathurst, Lulium Wood, St. Bartholomew's Hospital.
Bennett, Lizzie, London School of Medicine and Royal Free Hospital.
Berry, Albert Edward, Owens College and Manchester Royal Infirmary.
Blomfield, Edward Eldridge, B.S., London and Guy's Hospitals.
Bolton, Joseph Shaw, B.S., B.Sc., University College.
Bunch, John Le Mare, B.S., B.Sc., University College.
Castellote, Ramon Horace, University College.
Cole, Robert Henry, St. Mary's Hospital.
Collyer, Brice, St. Bartholomew's Hospital.
Crowley, Ralph Henry, St. Bartholomew's Hospital.
Eves, Percy Stanhope, B.S., University College.
Gully, Robert Cullum, St. Bartholomew's Hospital.
Hamilton, Richard, Owens College, Manchester Royal Infirmary, and Guy's Hospital.
Jones, Lillie Mabel Agnes, London School of Medicine for Women.
Joseph, Arthur Hill, University College and Royal Infirmary, Bristol, and King's College.
Lane, Clayton Arbuthnot, St. Mary's Hospital.
Lankester, Arthur Colborne, St. Thomas's Hospital.
†Leete, Arthur Henry, B.Sc., Guy's Hospital.
Low, Vincent Warren, B.S., St. Mary's Hospital.
Manning, Guy Eugene, Guy's Hospital.
Meakin, Harold Budgett, St. Bartholomew's Hospital.
Pace, Elizabeth Margaret, London School of Medicine and Royal Free Hospital.
Parsons, Christopher Thackray, St. Mary's Hospital.
Perram, Edward Arthur, St. Bartholomew's Hospital.
†Potts, William James, Owens College and Manchester Royal Infirmary.
*Roberts, Charles Hubert, St. Bartholomew's Hospital.
Rogerson, Clement Michael, Yorkshire College.
Shaw-Mackenzie, John Alexander, University College.
Smith, Edwin, St. Thomas's Hospital.
Smith, William Robert, B.S., King's College.
Smyth, Reginald Mander, St. Mary's Hospital.
Soden, Wilfred Newell, St. Bartholomew's Hospital.
Stanley, Arthur, St. Mary's Hospital.
Stedman, Thomas Bernard, University College.
Sturge, Mary Darby, London School of Medicine and Royal Free Hospital.
Ta' Bois, Alfred Charles, St. Bartholomew's Hospital.
Taylor, Edwin Claude, B.S., Guy's Hospital.
Taylor, Frederick Ryott P., B.S., Westminster Hospital.
Warner, Thomas, King's College.
Wells, Sydney Russell, B.Sc., St. George's Hospital.
Williams, Ethel Mary Nucella, London School of Medicine and Royal Free Hospital.
Williams, Samuel, University College.
Woollett, Charles Jerome, Charing-cross Hospital.
Wright, Sydney Faulconer, St. Thomas's Hospital.
Young, Robert Arthur, B.Sc., Middlesex Hospital.

STATE MEDICINE.

Symes, John Odery, St. Mary's Hospital.
Williamson, John, St. Bartholomew's Hospital.

* Gold medal.
† Obtained the number of marks qualifying for the gold medal.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen (whose names are arranged in order of seniority as Members), having passed the necessary examinations and having conformed to the by-laws and regulations, have been admitted Fellows of the College:—

Ferrand, Edward (Surg.-Lieut.-Colonel, I.M.S.), M.D. Durh., L.R.C.P. Edin., St. Bartholomew's Hospital and Durham University; Member, May 19th, 1875.
Foulerton, Alexander Grant Russell, L.R.C.P. Lond., St. Bartholomew's Hospital; July 30th, 1884.
Tanner, Herbert, L.R.C.P. Lond., St. Mary's and St. Thomas's Hospitals; April 28th, 1885.
Pisani, Lionel John (Surg.-Capt., I.M.S.), L.S.A. Lond., Charing-cross Hospital; Jan. 21st, 1886.

Ridley, Nicholas Charles, M.B., L.R.C.P. Lond., St. Mary's Hospital; May 10th, 1888.
Lace, Frederick, L.R.C.P. Lond., University College and Royal Infirmary, Bristol; May 9th, 1889.
Leaf, Cecil Huntington, M.B., B.C. Camb., L.R.C.P. Lond., Cambridge University and London Hospital; July 28th, 1890.
Curtis, Henry Jones, L.R.C.P. Lond., University College and Hospital; Feb. 12th, 1891.
Addison, Christopher, L.R.C.P. Lond., St. Bartholomew's Hospital; Nov. 12th, 1891.
Ballance, Hamilton Ashley, M.D., L.R.C.P. Lond., University College and Hospital; Aug. 1st, 1892.
Hainworth, Edward Marrack, M.B., B.S., L.R.C.P. Lond., St. Thomas's Hospital; Aug. 1st, 1892.
Randall, Martin, M.D., L.R.C.P. Lond., University College and Hospital; Aug. 1st, 1892.
Sutcliffe, William Greenwood, L.R.C.P. Lond., St. Thomas's Hospital; Aug. 1st, 1892.
Barnard, Harold Leslie, L.R.C.P. Lond., London Hospital; Nov. 10th, 1892.
Smith, Thomas Rudolph Hampden, M.B. Camb., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital; Nov. 10th, 1892.
Turner, William, M.B., L.R.C.P., L.S.A. Lond., King's College and Hospital; May 11th, 1893.
Elworthy, Henry Stuart, L.R.C.P. Lond., St. Bartholomew's Hospital; July 27th, 1893.
Arnold, Gilbert James, L.R.C.P. Lond., St. Thomas's Hospital; Nov. 9th, 1893.
Dickson, Henry Arthur David, L.R.C.P. Lond., St. Thomas's Hospital; Nov. 9th, 1893.
Colby, Francis Edward Albert, M.B. Camb., L.R.C.P. Lond., Cambridge University and St. Bartholomew's Hospital; Feb. 8th, 1894.
Brown, Ralph Charles, M.B., Ch.B. Melb., L.R.C.P. Lond., Melbourne University and Westminster Hospital; Nov. 14th, 1895.
Brodie, William Haig, M.D. Edin., Edinburgh University, St. Mary's and St. Bartholomew's Hospitals; not previously a Member.

The following gentlemen, having passed the necessary examinations, have been admitted Licentiates in Dental Surgery:—

Baker, William Herbert, Charing-cross Hospital and Dental Hospital of London.
Bascombe, Edwin Cecil Dare, Middlesex Hospital and National Dental Hospital.
Beaumont, Frederick Charles, Guy's Hospital.
Breakell, John James, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester.
Chambers, Thomas Rubens, Guy's Hospital.
Colyer, Stanley William Randolph, Charing-cross Hospital and Dental Hospital of London.
Dawson, William James Oliver, Guy's Hospital.
Denham, Norman, Guy's Hospital.
Dimock, Edward Claude, Guy's Hospital.
Goddard, John Wood, Guy's Hospital.
Handel, Franz Edward, Guy's Hospital.
Hankey, Stanley James, Charing-cross Hospital and Dental Hospital of London.
Harrison, Edward, Charing-cross Hospital and Dental Hospital of London.
Humby, William John, Middlesex Hospital and National Dental Hospital.
James, Benjamin Edgar, Guy's Hospital.
Jepson, Harold Ernest, Charing-cross Hospital and Dental Hospital of London.
Jones, Frederick Warner, Charing-cross Hospital and Dental Hospital of London.
King, Herbert, Guy's Hospital.
Lees, Tom, Charing-cross Hospital and Dental Hospital of London.
Lewis, James William, Guy's Hospital.
Ludbrook, Stephen Percy, Charing-cross Hospital and Dental Hospital of London.
Macdonald, George Ernest, University College, Liverpool, Charing-cross Hospital and Dental Hospital of London.
McKay, Robert, Middlesex Hospital and Dental Hospital of London.
Marston, Walter, Middlesex Hospital and Dental Hospital of London.
Mathews, Harold Dewe, Guy's Hospital.
Payne, Joseph Lewin, Guy's Hospital.
Pidgeon, Walter Herbert, Charing-cross Hospital and Dental Hospital of London.
Relph, Herbert John, Middlesex Hospital and National Dental Hospital.
Robertson, Harry Lennox, Mason College, Queen's and General Hospitals, and Birmingham Dental Hospital.
Rose, Samuel Frank, Middlesex Hospital and Dental Hospital of London.
Ryle, Arthur Buxton, Guy's Hospital.
Seccombe, Clovis Leopold, Middlesex Hospital and Dental Hospital of London.
Spencer, George Ross, Charing-cross Hospital and Dental Hospital of London.
Turton, Arthur William, Charing-cross Hospital and Dental Hospital of London.
Veitch, William MacGregor, University College, Royal Infirmary, and Dental Hospital, Liverpool.
Wood, James, Owens College, Royal Infirmary, and Victoria Dental Hospital, Manchester.

Seventeen gentlemen were referred for six months

FOREIGN UNIVERSITY INTELLIGENCE.—*Cracow:* Dr. Wicherkiewicz of Posen has been appointed Professor of Ophthalmology.—*Genoa:* Dr. Mostiari of Siena has been appointed Professor of Surgical Pathology.—*Naples:* Dr. Aniello has been appointed Extraordinary Professor of Orthopædi Surgery.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Tepliasin of Kazan, a well-known ophthalmologist.—Dr. G. H. Van der Mey, Professor of Midwifery and Gynæcology in the University of Amsterdam, from septicæmia following an operation.—Dr. Fauvel, a distinguished Parisian laryngologist whose opinion it was intended to have obtained in the case of the late Emperor Frederick, at the age of sixty-five.

PRESENTATIONS.—Mr. T. M. Wills, L.R.C.P., L.M., F.R.C.S. Irel., on the annual distribution, at Bootle, on the 13th inst., of certificates and medallions to the Bootle Fire Brigade and the police force in connexion with the St. John Ambulance Association, the mayor of the borough presiding, was the recipient of a portrait of himself, as a mark of appreciation of his services to the ambulance classes.—Dr. D. Mitchell, who has for the past fifteen years been in practice in Renton (Dumbartonshire) and has taken a prominent part in the public and political life of the district, has been presented with a purse of sovereigns on the occasion of his leaving Renton.

DIPHTHERIA IN LONDON.—Last week the registered deaths from diphtheria in London numbered 63, whereas the numbers in the three weeks preceding had been respectively 69, 63, and 69. The total last week was 20 in excess of the average for the fiftieth week of the years 1885-94. The deaths, as has now for some long time been the case, were nearly all in young persons of under twenty years. The week saw also deaths registered in Greater London, the larger share being credited to West Ham and to the Edmonton Union. In these two localities the disease seems to be especially fatal. The figures concerning notification of diphtheria in London are now before us for the four weeks ended with the last day of November. They show that every one of the sanitary areas of the county of London, excluding the port district, was invaded by diphtheria. The notifications in gross amount show a slight decline over the previous four weeks ended Nov. 2nd. The total notifications in the earlier period, 1305, have given place to 1269, and the weekly average of 326 to 317. On the other hand, whilst in the earlier period eight districts with over fifty notifications respectively had an aggregate of 655, in the later period ten districts had respectively over 50 notifications and a total of 734. Thus we have to face a weekly list of upwards of 300 notified attacks.

THE SANITARY INSTITUTE, PARKES MUSEUM, MARGARET STREET, W.—At a sessional meeting of the Sanitary Institute held at the Parkes Museum, Margaret-street, W., on Wednesday, Dec. 11th, Sir Benjamin Baker, K.C.M.G., LL.D., F.R.S., in the chair, Sir Douglas Galton, K.C.B., LL.D., F.R.S., read a paper on the Lessons to be learned from the Experimental Investigations by the State Board of Health of Massachusetts upon the Purification of Sewage. After dealing with the various systems of sewage filtration, he described the systems devised for the aeration of the filters, dealing more particularly with experiments made by Colonel Waring at Newport, New York. He summed up the conclusions to which the various experiments lead as follows: 1. The suspended matters of sewers (sludge) can be mechanically withheld by straining slowly through suitable material. 2. The filth accumulated by this straining material can be destroyed, and the straining medium restored to a clean condition by mere aeration. 3. The successive alternate operations of fouling and cleansing can be carried on indefinitely without renewal of the straining material. 4. The purification obtained by this straining process practically equals that accomplished by chemical precipitation, and is sufficient to admit of discharge into any considerable body of water not used as a source of domestic supply or for manufacturing purposes requiring great purity. 5. Such filters can be maintained in *constant* and *efficient* operation by suitable aeration. 6. The erection of a plant capable of purifying large volumes of sewage upon a relatively small area calls for no costly construction. Repairs and renewals are merely nominal. The attendance required is but slight. There is no outlay for chemicals, &c. The only expense of mechanical operation is the driving of the blower or air-compressor. 7. The process admits of wide variation in the selection of filtering material, and nearly every community can find in its local resources something suitable for the purpose.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.*

BOWES, WM., M.R.C.S., has been appointed Medical Officer for the Sixth Sanitary District of the East Ashford Union.

BRIMACOMBE, R. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health for Kingswood, vice H. Grace.

BURMAN, W. M., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer to the Wath and North Rotherham Joint Hospital.

DOWLING, G. W., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer of Health by the Alderley Edge Urban District Council.

EDDOWES, ALFRED, M.D. Edin., has been appointed a Physician to the St. George's and St. James's Dispensary, King street, Regent-street, W.

FRIEL, R., M.B., B.Ch., L.M. Irel., has been reappointed House Physician to the Richmond, Whitworth and Hardwicke Hospitals, Dublin.

HOGG, J. A., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Shardlow Sanitary District of the Shardlow Union.

LEWIS, FREDERICK W., M.R.C.S., L.R.C.P. Lond., has been appointed Senior House Surgeon to the General Infirmary at Gloucester and the Gloucestershire Eye Institution.

MORTON, A. C., M.R.C.S., has been reappointed Medical Officer of Health for the North Walsham Urban Sanitary District.

O'CONNELL, J., L.R.C.P., L.R.C.S. Edin., L.F.P.S. Glasg., has been appointed Senior Assistant Medical Officer for the Workhouse of the Township of Toxteth Park.

SHERA, J. B. P., L.R.C.S., L.R.C.P., L.M. Irel., has been appointed House Physician to the Richmond, Whitworth and Hardwicke Hospitals, Dublin.

STANLEY, H., M.B., B.C. Camb., has been appointed Medical Officer for the Fifth Sanitary District of the East Ashford Union.

STEPHENSON, SYDNEY, M.B., F.R.C.S.E., has been appointed Ophthalmic Surgeon to the North-Eastern Hospital for Children, Hackney-road, Shoreditch.

SWORDER, H., L.R.C.P. Lond., M.R.C.S., has been reappointed Medical Officer of Health for the Borough of Luton.

TAYLOR, H. H., F.R.C.S., M., L.R.C.P. Lond., has been appointed Assistant Surgeon to the Royal Alexandra Hospital for Sick Children, Brighton, vice Morgan.

THOMPSON, H. E., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the General Infirmary at Gloucester and the Gloucestershire Eye Institution.

TIBBETTS, T. M., M.B. Lond., L.R.C.P., M.R.C.S., has been appointed Medical Officer of Health by the Quarry Bank Urban District Council.

WAGSTAFF, J. P., L.R.C.P. Lond., M.R.C.S., has been appointed Medical Officer for the Pelham Sanitary District of the Bishop Stortford Union.

WALSH, LESLIE H., L.R.C.P. Lond., M.R.C.S., has been appointed Resident Medical Officer to the Royal Mineral Water Hospital, Bath, vice Wohlmann, resigned.

WALTER, E. W., L.R.C.P. Edin., L.M., M.R.C.S., has been appointed Medical Officer of Health by the Shoeburyness Urban District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRIDGNORTH AND SOUTH SHROPSHIRE INFIRMARY.—House Surgeon for one year. Salary £80, with board and lodging in the infirmary, and a certain fee for attending the in- and out-patients under the direction of the Honorary Surgeons. Applications to the Hon. Secretary, Oldbury Rectory, Bridgnorth.

BRIGHTON AND HOVE LYING-IN INSTITUTION AND HOSPITAL FOR WOMEN, West-street, Brighton.—House Surgeon, unmarried. Salary £30 per annum, with furnished quarters and board, gas, coals, and attendance.

CENTRAL LONDON THROAT, NOSE, AND EAR HOSPITAL, Gray's-inn-road, W.C.—Three Assistant Registrars.

CHELSEA HOSPITAL FOR WOMEN, Fulham-road, S.W.—Clinical Assistantships.

CHORLTON-UPON-MEDLOCK DISPENSARY, Manchester.—Resident House Surgeon, unmarried. Salary £100 a year, with furnished rooms and attendance.

CITY OF LONDON UNION INFIRMARY.—Dispenser at the Infirmary, Bow-road, E. Salary £100 per annum and dinner daily. Applications to the Clerk to the Guardians, 61, Bartholomew Close, E.C.

COUNTY BOROUGH OF CARDIFF.—Resident Medical Officer, unmarried, for the Borough Hospital for Infectious Diseases, for one year. Salary £50 per annum, with board (without stimulants) and residence in the hospital. Applications to Dr. Walford, Medical Officer of Health, Town Hall, Cardiff.

COUNTY BOROUGH OF WIGAN.—Medical Officer of Health and Medical Superintendent of the Sanatorium. Salary £225 per annum, payable monthly. Applications to the Town Clerk, Municipal Buildings, Wigan.

EDMONTON UNION.—Medical Officer at the Chase Farm Schools, Enfield. Salary £80 per annum. Applications to the Solicitor and Clerk, The Grange, White Hart-lane, Tottenham.

HOLLOWAY SANATORIUM HOSPITAL FOR THE INSANE, Virginia Water.—Junior Assistant Medical Officer (lady) for the ladies' side. Salary £100. Applications to Dr. Phillips, Virginia Water.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton.—Four Clinical Assistants in the out-patient department, and for Clinical Clerks to the in-patient physicians.

KING'S COLLEGE, London.—A Demonstrator in the Bacteriological Laboratory.

LIVERPOOL DISPENSARIES.—Assistant Surgeon, unmarried. Salary £80, to be increased to £90 per annum after the first year's service, with apartments, board, and attendance. Applications to the Secretary, 34, Moorfields, Liverpool.

OWENS COLLEGE, Manchester.—Junior Demonstratorship in Physiology and Histology. Annual salary £100.

POPLAR AND STEPNEY SICK ASYLUM DISTRICT.—Second Assistant Medical Officer. Salary £80 per annum, to be increased by yearly increments of £10 to a maximum of £100, with rations, furnished apartments, and washing. Applications to the Clerk to the Managers, Bromley, Middlesex, E.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN, Marylebone-road, N.W.—Surgeon to the out-department.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Surgeon, for twelve months. An honorarium of £50 per annum, with board and lodging in the hospital. Also House Physician to the in-patients, for eight months. An honorarium at the rate of £50 per annum, with board and lodging in the hospital.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL, Wolverhampton.—Resident Assistant for six months. Board, lodging, and washing provided.

YORK COUNTY HOSPITAL, York.—Assistant House Surgeon. Salary £60 per annum, with board, rooms, washing, &c.

Births, Marriages, and Deaths.

BIRTHS.

BLATCHLEY.—On Dec. 10th, at Evelyn-street, Deptford, S.E., the wife of J. B. Challands Blatchley, L.R.C.P., L.R.C.S. and L.M. Irel., of a daughter.

MCCAUSLAND.—On Dec. 17th, at Swanage, Dorset, the wife of A. McCausland, M.D. Brussels, of a son.

SKELDING.—On Dec. 8th, at Bedford, the wife of Henry Skelding, M.B. Camb., of a daughter.

TAIT.—On Dec. 11th, at Highbury-park, the wife of Edward Sabine Tait, M.D., of a son.

MARRIAGES.

HUDSON—BIRD.—On Oct. 21st, 1895, at St. Peter's Church, Mossel Bay Cape Colony, by the Venerable Archdeacon Fogg, Francis Joseph Hudson, M.B. Aberd., District Surgeon, George, third son of the late John F. Hudson, Mossel Bay, to Bessie Bird, eldest daughter of the late Captain George E. Bird, R.N.R.

SCOTT—CLEVELAND.—On Dec. 17th, at St. James's, Kidbrook, Patrick Cumin Scott, M.B. Cantab., M.R.C.S. Eng., youngest son of James Nairne Scott, Esq., Blackheath, to Alice Adelaide, younger daughter of the late Henry Cleveland, Esq., Solicitor to Government, Bombay.

SENIOR—WESTALL.—On Dec. 17th, at St. Cyprian's, Lewisham, Robert W. Senior, M.R.C.S., L.R.C.P., late Surgeon R.N., son of the late Joseph Senior, of Streatham, to Helen Maud, daughter of William Mawley Westall, of St. John's Lodge, Brockley.

SWANTON—DOE.—On Dec. 18th, at St. Michael's Church, Cornhill, James Hutchinson Swanton, M.D. Irel., M.A., to Sophia Doe, niece of the late Joseph B. Doe, J.P., D.L., of Edmonton.

DEATHS.

AMYOT.—On Dec. 15th, at Diss, Norfolk, Thomas Edward Amyot, F.R.C.S., aged 78.

BROOKES.—On Dec. 10th, at Much Wenlock, Shropshire, William Penny Brookes, F.R.C.S. Eng., J.P., in his 87th year.

CHANDRA.—On Dec. 14th, in London, Brigade Surgeon-Lieutenant-Colonel Rajendra Chandra Chandra, late Professor, Medical College, Calcutta.

HANBURY.—On Dec. 11th, at The Oaks, Sidcup, Kent, Richard Savill Hanbury, M.D. St. And., formerly Surgeon 2nd West York L.I. Militia, and of Peterborough.

MARTINE.—On Dec. 11th, at Weston, Haddington, N.B., William Martine, M.D. Edin.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICE.

"THE LANCET" AND ACCIDENT INSURANCE.

A LITHOGRAPHED CIRCULAR LETTER, emanating from an office in the Strand district, is being sent to members of the medical profession, offering to supply them with THE LANCET, in conjunction with an accident insurance policy. The Proprietors of THE LANCET are in no way connected with the scheme (of which they cannot approve), and were not aware of its inception until their attention was called to it by a reader who had received the circular.

MEDICAL OFFICERS OF HEALTH AND THEIR TENURE OF OFFICE.

Mr. W. J. F. Churchouse, L.R.C.P. Edin., &c., medical officer of health to the Rural District of Daventry, sends us a lengthy communication from which it is quite evident that, owing to proper and honourable performance of his duty under the orders of the Local Government Board, he has fallen under the displeasure of people who prefer no sewers and a dirty water-supply to decent sanitation which will involve some cost; and now another officer has been elected in his place. Mr. Churchouse also sends us a correspondence with the Local Government Board on the subject, in which he expresses his astonishment that the central authority, whose "approval" is necessary to every appointment, as regards which they certify for repayment of half the salary by the County Council, should not uphold him as health officer. Our correspondent's case, unfortunately, is only one of many others, and as the law now stands we do not see how matters can be mended. He was only appointed up to a certain date. When that date arrived the post was legally vacant, and it rested absolutely with the district council to appoint him again or to appoint someone else. It is true that the Public Health Act gives power of "approval" to the Local Government Board; but this approval has not to do with the individual appointed, unless, indeed, it can be shown that he is morally or physically unfit to perform the duties. It is mainly concerned with the possession of proper medical qualifications and with the assignment of a reasonable salary. No statute gives the Local Government Board power to impose an individual medical officer of health on any authority having the statutory power of making a fresh appointment. Indeed, we do not see how it could be otherwise; the responsible authority must have the responsibility of selecting its own officer. But, once appointed, he should be upheld; and it is for this reason that we gladly see that the Local Government Board now urge authorities to make most of these appointments either for a long term of years or for life, during which period of appointment the holders cannot be removed, except with the Board's sanction. We deeply regret the circumstances attaching to our correspondent's case. It affords an additional reason for demanding of Parliament that, as regards tenure of office during good behaviour, provincial medical officers of health should be placed in the same position as that attaching to metropolitan officers of health.

WILLIAM III. AND HIS PHYSICIANS IN 1700.

THE following is the account of the post-mortem examination performed upon William III. after the illness referred to in our issue of Nov. 23rd:—

Report of the Physitians and Surgeons, comanded to assist at the dissection of the Body of the late King.

Upon the first view of the Body, before dissection, the following appearances were remarkable.

The Body in generall was much emaciated; Both the Legs up to the Knees and a little higher, as also the right hand and arm as far as the Elbow, were considerably sweld.

There appeared likewise on the left thigh near the Hipp, a bladder full of water, of the bignesse of a small Pullet's Egg, ressembling a Blane.

Upon opening the Belly, the Guts appeared of a Livid colour, and the bloud contained in the vessels there of blackish: The gutt called Jlion had in some places, the markes of a slight Jnflammation.

The Pancreas, Mesentery, Liver, Gall Bladder, Spleen, Kidneys and Stomack, were all sound and without fault.

Jn the Thorax or Chest wee observed, that the right side of the Lobes of the Lungs adhered to the Pleura, and the Left, much more, from which upon separation, there Jssued forth a quantitie of Liquor judged to be purulent or frothy serum: The upper Lobe of the left side of the Lungs and the part of the Pleura annext to it, were inflamed to a degree of mortification: And this wee looke upon as the immediate cause of the King's death.

ffrom the ventricles of the Heart and the great bloud vessels issuing out of them were taken severall large tough ffleshlike substances of the Kind called Polliposer.

The Heart was of the smaller size, but firm and strong.

Upon laying bare the right Collar bone, wee found that it had bin broken neare the shoulder and well sett, some Extravasated bloud was lodged above and below the ffracture.

The Brain was perfectly sound and without any signe of distemper.

Jt is very rare to find a Body, with so little bloud, as was seen in this, there being more in the Lungs, than in all the parts besides putt together.

Signed

HUTTON BLONEMORE
MILLINGTON BIDLOO
[and others.]

Delivered to ye Queen and Councell, March ijth, 170½.

Endorced—"Dissection of the Late King's Body." In writing of a later date and in different coloured ink, similar to the signatures—"To His Grace the Duck off Queensburry, &c., &c."

Mr. Thos. Jackson is thanked for his communication. If he will take counsel with his medical man, and present the facts to us properly attested by that gentleman, we shall be happy to give them consideration.

"A QUERY."

To the Editors of THE LANCET.

SIRS,—In answer to your correspondent, "Zambaan," *re* strychnine in snake poisoning, may I be allowed to say that the treatment, according to Dr. Muller, is to inject, in urgent cases, ½ gr., in milder ones ¼ gr. every half-hour until the effects of the snake poison are completely removed, and is perfectly safe practice which none who follow it will have cause to regret. A very small dose will then suffice to produce slight muscular spasms, and, to make doubly sure, a glass or two of whisky-and-water will show by their exhilarating effect that all danger is past. In a very bad case I had the patient was in a state of coma when I saw him; so I commenced by injecting fifteen minims of liquor strychniæ B.P., and twenty minutes afterwards injected a similar amount, both in the neighbourhood of the bite. Altogether I was obliged to inject sixty-five minims of the liquor—the largest quantity ever used up to that date (April, 1890). Messrs. Burroughs, Wellcome, and Co. of Snow-hill make the requisite tabloids, which are very convenient to carry; but I used the liquor strychniæ B.P. with good results for some years, and generally combined it with a little cocaine.

I am, Sirs, faithfully yours,

E. ST. GEORGE QUEELY,
formerly Government Medical Officer, Maytown
Dec. 16th, 1895. District, North Queensland.

VANISHING CUSTOMS.

To the Editors of THE LANCET.

SIRS,—I am endeavouring to obtain for scientific purposes trustworthy evidence concerning customs and superstitions connected with death and burial; and it has been suggested to me that there are many medical men in villages and country places all over the United Kingdom who often come across odd, old-world customs, sayings, and superstitions, especially among the peasantry and labouring classes, and who, if they knew that these were of value, would be glad to forward a note of them. You will be conferring a favour on me if you will allow me to make known through your columns that I shall be most grateful for any such information, and that I shall be happy to acknowledge the kindness of my correspondents in any use I may make of their communications. I am, Sirs, yours obediently,

Highgarth, Gloucester, Dec. 4th, 1895. E. SIDNEY HARTLAND.

"THE CLIMATE OF THE EAST COAST OF AFRICA."

To the Editors of THE LANCET.

SIRS,—In reply to the inquiry of "Voyager" regarding the climate of the east coast of Africa permit me to say that it depends on how long he proposes to be on the coast, and how much time he proposes to stay on shore at the places he mentions, and whether it includes little shooting excursions up the rivers. Speaking generally, he may voyage along the coast from Natal to Zanzibar, calling at every port, and even spending a few hours on shore at each place, provided he sleeps on board at night, and suffer no ill consequence whatever. I speak with an experience of over three years on the east coast, the Zambesi river, and Lake Nyassa. I have not put in at all the coast ports, or, indeed, at most of them; but I have sailed from the Caps to Aden, calling at the principal ports, and I have no hesitation in prophesying a very pleasant, safe, and interesting trip for "Voyager" and his friends, and my only regret is that I am not to be one of the party.

I am, Sirs, yours faithfully,

T. THORNTON MACKLIN, M.D.

St. Mary's, Isles of Scilly, Cornwall, Dec. 16th, 1895.

P.S.—If your correspondent would like to make further inquiries, I shall be happy to respond.—T. T. M.

To the Editors of THE LANCET.

SIRS,—In reply to your correspondent, "Voyager," I can reassure him that a trip by sea from Natal to Zanzibar is free from danger of fever, although the temperature will be pretty hot at this time of year. Travelling along the edge of the coast itself, or at sea within a couple of miles, would not have been so safe at the commencement of the wet season now past. I am, Sirs, yours faithfully,

Cromwell-road, S.W., Dec. 13th, 1895. ROBERT J. COLENSO.

To the Editors of THE LANCET.

SIRS,—In reply to "Voyager's" letter I may mention that while acting as surgeon in the Union Steam Ship Co.'s service, in 1893 and 1894, I went twice along the east coast from Cape Town to Zanzibar. The voyage is by no means unhealthy for those coasting. I never had fever myself, nor did I know of any cases of fever acquired by officers or crew while coasting. Delagoa Bay and Beira are not particularly healthy places for permanent abode; but there is no fear of getting malarial fever while living on board a vessel during her stay at these places, nor is one precluded from landing for a short time by the climate. The people who get malaria are those who are compelled to live on shore for some time. If your correspondent cares to communicate with me, I shall be happy to give him any further information I can. I am, Sirs, yours faithfully,

Dec. 17th, 1895. SETH.

To the Editors of THE LANCET.

SIRS,—In reply to "Voyager" allow me to say that part of the littoral of East Africa—namely, Natal to Zanzibar—is particularly unhealthy, for it includes the worst governed part of Africa—the Portuguese territory. The sandy soil is permeated with miasmata, and the sanitary arrangements are most primitive. Delagoa Bay is very deadly to Europeans, and also another large place, Quilimane, higher up. I have visited every town on the east littoral of Africa from Cape Town to Aden. At Delagoa Bay I found the medical man and the Consul laid up with fever. The former told me it was a hell upon earth, and was much surprised that I had come ashore with my patient, with whom I was travelling round the world *viâ* the east coast of Africa. I have an exhaustive account of my trip along this coast, and shall be pleased to give your correspondent any information about this littoral. The steamship service is very good, the officers of the companies—the Donald Currie line and the British Indian line—being particularly civil and obliging. Mosquitoes (particularly at Quilimane) are very troublesome. By "delicate" health I conclude "Voyager" uses the word in every sense. I am, Sirs, yours truly,

J. F. BRISCOE,

Medical Superintendent, Westbrooke House Asylum,

Dec. 14th, 1895. Alton.

To the Editors of THE LANCET.

SIRS,—I saw on Saturday night "Voyager's" letter in THE LANCET and in reply thereto I beg to offer the following observations. I returned from Zanzibar a few months ago, having been in charge of the English hospital there connected with the Universities Mission to Central Africa. I do not think one can advise anyone to go to Zanzibar simply for pleasure, more especially a delicate person. There is a great deal of malaria there, and in March, just at the end of the hot season, I expect, as was the case last year, dysentery will be rife. The rainy season usually begins about the end of March, and at the end of it the most unhealthy time of the year sets in. Some people, of course, have fever mildly, but a serious attack very often leaves lasting effects. Further, there is really nothing in Zanzibar to make it worth while to go there. The island is pretty; but there is nothing of interest beyond the beautiful church built by Bishop Steere. To one who lives and has work in the place it is, of course, different, but to a casual visitor there are no attractions. The hotels also are very bad. The English community there is fairly large and very hospitable; so that in this way visitors to the island generally have a pleasant time. The Delagoa Bay fever is, I believe, even worse than that of Zanzibar, and the place, from all I have heard about it from those who have been there, is very dreary. The climate of Zanzibar is very hot and very damp, somewhat resembling that of a fern-house at home. Mosquitoes abound. Prickly heat and boils also are often the lot of new-comers. Altogether, it is scarcely the place to go to for a pleasure trip, although people who live there like it and manage to be very happy there, in spite of its drawbacks. I am, Sirs, yours faithfully,

Norfolk street, Strand, W., Dec. 16th, 1895. MARGARET BREAY.

"TESTICLE *v.* SWEETBREAD."

To the Editors of THE LANCET.

SIRS,—The letter on the above subject in your issue of Nov. 30th has just been brought to my notice. I should like to mention, for the information of Mr. J. Miller, that in this part of the country testicles, especially those of lambs, are a very common dish indeed. I have myself seen farm labourers, when they have been castrating the male lambs, frequently eat them as they draw out the testicles. The lamb is held up by one man, whilst another takes up the skin of the scrotum and snips off a bit of the wool; he then makes a vertical nick in the skin and through the tunica vaginalis, and, pushing the testicle through the opening, draws it out with his teeth. He then either eats it, puts it carefully on one side, or else throws it on the ground, when, if any dogs are about, it is quickly eaten up by them. I am informed by those who have partaken of this dish (cooked in milk) that it is simply delicious; but I, for one, should not care to partake of it.

I am, Sirs, yours faithfully,

J. T. ROGER MILLER,

Malton, Yorks, Dec. 17th, 1895. Fellow, Obstetrical Society, London.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, Dec. 19th, 1895.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radiation in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
Dec. 13	29·29	N.W.	39	37	66	46	37	0·23	Cloudy
" 14	29·76	N.W.	39	36	54	53	36	...	Foggy
" 15	29·32	S.W.	51	50	55	51	39	0·35	Cloudy
" 16	29·12	S.W.	42	40	50	45	38	0·07	Cloudy
" 17	29·52	S.	43	42	52	46	42	0·30	Cloudy
" 18	29·71	E.	41	40	48	44	40	0·02	Raining
" 19	29·83	E.	38	37	42	40	37	0·01	Overcast

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (1 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.).

TUESDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Westminster (2 P.M.), West London (2 30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1.30 P.M.), St. Mark's (2 30 P.M.), Cancer (2 P.M.).

WEDNESDAY.—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.).

THURSDAY.—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (2 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.).

FRIDAY.—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.).

SATURDAY.—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

SATURDAY.—ROYAL INSTITUTION.—3 P.M. Professor John Gray McKendrick: Sound, Hearing, and Speech (experimentally illustrated).

During the week marked copies of the following newspapers have been received:—*Sussex Daily News, Louth Times, Oban Times, Northern Whig, Sheffield Telegraph, Liverpool Courier, Birmingham Gazette, Hackney Mercury, Suffolk Times, Manchester Guardian, Levant Herald, Freeman's Journal, Wigan Examiner, Wolverhampton Chronicle, Brighton Gazette, Bristol Mercury, Yorkshire Post, Ashbourne News, Derbyshire Courier, Leeds Mercury, Hampshire Telegraph, Liverpool Daily Post, Crewe Guardian, North Herald Reporter, Cork Constitution, Hereford Weekly Marvel, Sanitary Record, Times of India, Leeds Daily News, Notes and Queries, Leeds Evening Express, Parish Councillor, Times, Citizen, Nottingham Guardian, Temperance Record, Westminster Gazette, Blackburn Daily Telegraph, New Age, The Lady's Pictorial, East Anglian Times, Echo, Lancashire Daily Express, Jersey Times, West Kent Advertiser, Scotsman, Kidderminster Shuttle, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Dr. J. J. Allen, Portland, Oregon, U. S. A.; Messrs. E. Austin and Son, Clifton; Messrs. R. Anderson and Co., Lond.; Association for the Suppression of Street Noises, Sec. of; Anderson's College Medical School, Glasgow, Treasurer of; *Annales d'Oculistique, Les*, Brussels; Alpha, Lond.

B.—Dr. T. Lauder Brunton, Lond.; Dr. Buchanan, Lond.; Dr. H. C. Bastian, Lond.; Mr. G. H. Broadbent, Manchester; Mr. H. Bigg, Lond; Mr. G. F. Burchill, Wallington; Mr. R. A. Bayliss, Spondon, Derbyshire; Mr. J. P. Bush, Clifton; Mr. A. De W. Baker, Dawlish; Messrs. Burgoyne, Burbidges, and Co., Lond.; Messrs. J. Beal and Son, Brighton; Messrs. J. Bell and Co., Lond.; Messrs. Brady and Martin, Newcastle-on-Tyne; Messrs. Burroughs, Wellcome, and Co., London; Bancroft's School, Woodford Wells, Manager of; B. B., Lond.

C.—Dr. J. M. Clarke, Clifton; Dr. W. Coates, Lahore; Dr. L. Cane, Peterboro'; Mr. W. N. Clemmey, Bootle; Mr. W. C. G. Collins, Aylesford; Mr. S. Constable, Lond.; Miss Candy, Lond.; Messrs. A. H. Cox and Co., Brighton; Chelsea Hospital for Women, Sec. of, Central London Throat, &c., Hospital, Sec. of; Cheyne Hospital for Sick, Chelsea, Sec. of; Castle Hotel, near Ringwood; Cooperative Purchasing Agency, Bath; Cortex, Lond.

D.—Mr. J. A. W. Dallard, Lond.; Devon, Lond.; Derbyshire Royal Infirmary, Sec. of.

E.—East London Hospital for Children, Sec. of; Emeritus, Lond.

F.—French Hospital, London, Secretary of.

G.—Dr. H. L. Gordon, Lond.; *Gazette* Co., Birmingham.

H.—Dr. J. Hinshelwood, Glasgow; Mr. P. H. Beale, Lond.; Mr. J. L. Hamilton, Brighton; Mr J. Heywood, Manchester; Mr. W. Heffer, Cambridge Messrs. Hertz and Collingwood, Lond.; Hamilton Association, Lond., Supt. of.

I.—Inquirens, Northampton.

J.—Mr C. E. Jennings, Lond.; Mr. R. G. Jack, South Kensington; Mr. T. Jones, Mansfield.

K.—Dr. T. N. Kelynack, Manchester; Mr. H. Knevitt, Lond.; Messrs. Keen, Robinson, and Co., Lond.

L.—Dr. F. Levison, Copenhagen; Mr. H. Littlewood, Leeds; Mr. R. S. Lipscomb, Starcross; Mr. T. S. Lacey, Royton; Mr. J. D. Lewis, Llandyssul; Mr. K. K. Lewis, London; Messrs. Lever Bros., Lond; Messrs. Loescher and Co., Rome; Liquor Carnis Co., Aston Clinton; Lewisham Union Infirmary, Sec. of.

M.—Dr. W. McCallin, Castledawson; Dr. H. McDonnell, Dundalk; Dr. D. Macartney, Partick; Mr. R. Mosse, Lond.; Mr. C. Mansell Moullin, Lond.; Mr. P. Möller, Lond.; Messrs. Manlove, Alliott, and Co., Nottingham; Messrs. C. Mitchell and Co., Lond.; Moss, Litter, and Peat Industries, Lond.; Mason College, Birmingham, Librarian of; Medical Society of Victoria, Melbourne, Sec. of; M. S. R., North Kensington, S.W.; M.D., Lond.

N.—Northumberland and Durham Medical Society, Hon. Sec. of; National Provident Institution, Lond., Sec. of.

O.—O. Q. R., Lond.

P.—Dr. S. R. Philipps, Virginia Water; Mr. F. Passmore, Lond.; Mr. H. W. Page, Lond.; Mr. H. L. Pearson, Birkenhead; Mr. V. V. Podwyssotzky, Moscow; Mr. Y. J. Pentland, Edinburgh; Messrs. Parke, Davis, and Co., Lond.; Practitioner, Lond.

R.—Mr. J. Rand, Lond.; Mr. J. Romano, Newbattle; Mr. W. A. Richardson, Lond.; Mr. W. Rae, Northampton; Messrs. Ridges and Sons, Wolverhampton; Messrs. J. Richardson and Co., Leicester; Royal College of Surgeons, Lond., Assistant Sec. of; Royal Statistical Society, Lond., Sec. of; *Roxburghe Press*, Lond., Editor of; *Revue Internationale*, Paris.

S.—Dr. H. Simpson, Frodsham; Surgeon-Major H. F. Stokes, Lond.; Mr. H. L. Smith, Balham; Mr. F. W. Strong, Stroud; Messrs. Spies, Bros., and Co., Lond.; Messrs. W. H. Smith and Son, Liverpool; Messrs. G. Street and Co., Lond.; Messrs. F. Stearns and Co., Lond.; St. Thomas's Hospital, Lond., Steward of; Sheffield City, Clerk of; St. Luke's Hospital, Lond., Steward of; *South Wales Daily News*, Cardiff, Proprietors of; Scottish Preserves Co., Greenock; S. T., Lond.

T.—Dr. E. F. Trevelyan, Lond.; Mr J. K. Thornton, Lond.; Mrs. W. B. Thomson, Ilkley; Thresh's Disinfector Co., Chelmsford, Managing Director of.

U.—University of London, Sec. of; Upsilon, Lond.

V.—Varilat Elastic Stocking Co., Lond.; Victoria Hospital for Children, Chelsea, Sec. of; Victoria Hospital for Children, Lond., Sec. of; Verax, Barnsbury.

W.—Dr. R. Walford, Cardiff; Mr C. Wilkes, Lond.; Mr. W. M. Wills, Lond.; Mr. W. Whitehead, Manchester; Mr. J. L. Williams, Lond.; Messrs. J. Wright and Co., Bristol; Messrs. Wall and Sails, Lond.

X.—X. Y. Z., Lond.

Y.—York County Hospital, Sec. of; Yerep, Bampton.

Z.—Messrs. A. and M. Zimmermann, Lond.; Zenana Medical College, Lond., Hon. Sec. of.

Letters, each with enclosure, are also acknowledged from—

A.—Dr. E. Allen, Hawes; Mr. E. Appleton, Stockton-on-Tees; Mr. A. E. Ash, Stoke Ville; Archdeacon of Emly, Thurles; Mr. S. Aldred, Great Yarmouth; Apollinaris Co., Lond.; Anderson's College Medical School, Glasgow, Treasurer of; Addiscombe, East Croydon; Alpha, Lond.; Aleph.

B.—Mr. C. Beesley, Darton; Mr. C. S. Bowker, Pontnewydd; Mr. T. W. B. Burn, Lond.; Birmingham and Midland Counties Sanatorium, Sec. of; Bristol Incorporation, Clerk of; B. A., Lond.; B. W., Lond.; B. A. B., Lond.

C.—Dr. J. Cagney, Lond.; Dr. A. J. Collis, Weston-super-Mare; Dr. E. R. St. C. Corbyn, Beckenham; Mr. J. Carter, Lond.; Mr. A. E. Couzens, Westbury; Messrs. A. H. Cox and Co., Brighton; Cortex, Lond.; Cyclops, Lond.

D.—Mr. T. F. Dillon, Rhos; Delta, Lond.

E.—Mr. J. R. Essex, Pontypool; Mr. R. Edwards, Llanfyllin; Mr. E. H. Ellison, Pattishall; Mr. T. Eaton, Salcombe; Ebor, Lond.; Eos, Lond.

F.—Dr. H. J. Faucet, Tamworth; Dr. H. S. Fordyce, Woollahea, Sydney; Mr. P. T. Fenn, Swaffham; Fitz, Birmingham.

G.—Messrs. R. W. Greeff and Co., Lond.; Gwalia, Lond.

H.—Dr. S. H. Habershon, Lond.; Dr. F. J. Hudson, George Town, Cape Colony; Mr. W. H. Haw, Barberton, South African Republic; Mr. W. A. Hardiker, Brymbo; Mr. W. Heffer, Cambridge; Messrs. Hayes and Son, Stamford.

J.—Mr. H. S. Jackson, H.M.S. *York*, Mediterranean Station; Mr. W. B. Jones, Abercarn: J. B., Crowborough.

K.—Dr. H. P. Keatinge, Cairo.

L.—Dr. E. S. Lee, St. Leonard's-on-Sea; Lumbar Plexus, Lond.; Loeam, Leicester.

M.—Dr. D. Morton, Lond.; Dr. A. A. Moore, South Hetton; Dr. A. B. MacKee, Hartland; Dr. E. M. Madden, Bromley, Kent; Mr. F. V. Milward, Torquay; Mr. W. McCollin, Castledawson; Mr. O. G. R. McWilliam, Teignmouth; Mr. H. W. Moor, Mayfield; Mr. J. Moynihan, Cork; Maltine Manufacturing Co., Lond.; Malvern Hospital Committee, Clerk of; Manchester Hospital for Consumption, Sec. of; M.A., Lond.; M.D., Lond.; Medicus, Lond.

N.—Dr. E. Norton, Folkestone; Mr. E. Nicholson, Haxey.

O.—Omega, Lond.

P.—Miss Pincoffs, Dunster; P. W. R., Lond.

R.—Mr. W. Reeve, Lond.; Mr. J. Romans, Newton Grange; Mr. T. E. Rice, Newton Abbot; Messrs. Robertson and Scott, Edinburgh; Radius, Tunstall.

S.—Dr. W. Shand, York; Dr. W. H. Smart, Polesworth; Mr C. E. Stanger, East Peckham; Mr. M. Stanford, Lond.; Mr. T. G. Simpson, Lond.; Southport Infirmary, Sec. of; Servabo Fidem, Lond.; S. H. S., Lond.

T.—Mr. J. Thin, Edinburgh; The Terröl Co., Lond.; Temperate, Lond.; Theta, Lond.

V.—Victorian, Lond.

W.—Dr. T. A. Wood, Douglas; Dr. J. Wiglesworth, Rainhill; Dr. J. H. Waterhouse, Maltby Grange; Mr. B. Wheeler, Manchester; Mr. E. W. Wood, Lond.; Mr. A. W. Walters, Cambridge; Mr. T. H. Warren, East Dereham; Mr. C. Walcott, Boston, U.S.A.; West Ham Hospital, Lond., Sec. of; West Kent Sanitary District, Bromley, Clerk of.

Y.—York Lunatic Asylum, Sec. of.

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Answers are now received at this Office, by special arrangement, to advertisements appearing in THE LANCET.

The Manager cannot hold himself responsible for the return of testimonials, &c., sent to the Office in reply to Advertisements; copies only should be forwarded.

Terms for Serial Insertions may be obtained of the Manager, to whom all letters relating to Advertisements or Subscriptions should be addressed.

THE LANCET can be obtained at all Messrs. W. H. Smith and Son's and other Railway Bookstalls throughout the United Kingdom. Advertisements are also received by them and all other Advertising Agents.

ADVERTISING.

Books and Publications	... Seven Lines and under	£0	5	0
Official and General Announcements	Ditto	0	5	0
Trade and Miscellaneous Advertisements	Ditto	0	4	6
	Every additional Line	0	0	6
First Page (under Contents) (Books only)	when space available Five Lines and under	0	5	0
	Every additional Line	0	1	0
Quarter Page		1	10	0
Half a Page		2	15	0
An Entire Page		5	5	0

Terms for Position Pages and Serial Insertions on application.

NOTICE.—Advertisers are requested to observe that it is contrary to the Postal Regulations to receive at Post Offices letters addressed to fictitious names or initials only.

Agent for the Advertisement Department in France—J. ASTIER, 8, Rue Traversière Asnières, Paris.